

Orlando Easterly Wetlands Compliance and Performance Review for the City of Orlando's Easterly Wetlands Treatment System

2020 Annual Report

March 2021

Prepared for Florida Department of Environmental Protection 3319 Maguire Boulevard, Suite 232 Orlando, Florida 32803

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Cover Photo Taken by Jim Werner



MESSAGE FROM THE

MAYOR

As a municipal government, the City of Orlando is committed to providing residents with first-class services and amenities and the Orlando Easterly Wetlands help us provide both at the same time.

One of the world's first large-scale, manmade wetlands designed for the advanced treatment of reclaimed water, the Orlando Easterly Wetlands also are a home for countless wildlife species and a location for recreation activities for residents. The park is 1,650 acres in size and visitors can participate in hiking, wildlife viewing, biking, horseback riding and guided tours. More than 50,000 people visit the park annually.

I am proud that the Orlando Easterly Wetlands has won numerous environmental and engineering awards over the years. As a city, we are also proud that the wetlands represent a cost-effective and sustainable solution for wastewater treatment.

I hope you find this annual water quality report informative.

Sincerely,

Buddy Dyer Mayor

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- C 2020 OEW Monthly Water Quality and Performance Data
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Introduction

The City of Orlando's Orlando Easterly Wetlands (OEW) Annual Report summarizes the operational data of the calendar year 2020 and fulfills the requirements of Chapter 62-611.700 (1) detailed in the Florida Department of Environmental Protection (FDEP) Domestic Wastewater Facility Permit No. FL0037966. The report includes a review of historical data and trends as they relate to the operation of the OEW. On October 22, 2020, permit renewal occurred and any amendments since the date of issuance has been identified in the OEW Annual Report.

1 Background

1.1 Iron Bridge Regional Water Reclamation Facility

The Iron Bridge Regional Water Reclamation Facility (Iron Bridge) was built in 1982 in Oviedo, Florida (Figure 1-1). It is owned and managed by the City of Orlando and provides service to approximately 400,000 people in the Cities of Orlando, Winter Park, Maitland, Casselberry as well as parts of unincorporated Orange and Seminole Counties. Iron Bridge is permitted to receive 40 million gallons per day (MGD) of wastewater. Once treated, the effluent is distributed to public access reuse, the Little Econlockhatchee River as well as the man-made Orlando Easterly Wetlands (OEW).

1.2 Orlando Easterly Wetlands

Iron Bridge is permitted to send up to 35 MGD of treated, reclaimed water through 17 miles of pipe to the OEW located in Christmas, Florida (Figure 1-2). OEW's primary purpose is to provide additional nutrient removal. Prior to being created, the land was historically used for agriculture.

OEW was originally intended to have three vegetative communities: a 410 acre of deep marsh primarily comprised of cattail (*Typha spp*) and bulrush (*Schoenoplectus spp*) designed to accomplish nutrient removal; a 380 acre mixed marsh comprised of over 60 submerged and emergent herbaceous species designed to provide wildlife habitat and additional nutrient removal; and a 400 acre area originally planted as a hardwood swamp with a herbaceous understory. The trees in the hardwood swamp did not establish as planned and the area is now managed as a mixed marsh habitat. An approximately 90-acre lake (Lake Searcy) is located within the final treatment areas (Cells 16 and Cell 17). The lake was constructed to provide fill material for the 18 miles of earthen levees and to enhance wildlife habitat. Because of the environmental enhancement provided by the varied wildlife habitats and the recreation of lost wetland habitats, the OEW is considered a beneficial reuse system under FDEP rules.

OEW was originally designed to receive 20 MGD; however, FDEP limited flows to 13 MGD because it was one of the first systems of its kind implemented in Florida. Flows were gradually increased to the full 20 MGD. After more than eight years of proven performance, testing began

in 1997 through early 1998, to simulate higher flows through the OEW system. Three simulations were performed that involved loadings at approximately 10, 14 and 15 MGD through one-third of the wetlands to simulate flows of 30, 40 and 45 MGD, respectively. The testing results were included in the 1997 OEW Monitoring Report. Based on the results, the FDEP permit was modified on September 4, 2001, to increase the OEW capacity to 35 MGD.

The OEW was originally designed with 17 treatments cells and one outfall (D002). In 2003, following approval of FDEP, Cell 18 and a second outfall (D003) were added to accommodate the higher capacity and provide greater flexibility in managing the system. An additional berm was created between Lake Searcy and Cell 17 in 2007. Two control structures (WLLS1 and WLLS2) were constructed along the new berm, allowing greater hydraulic control. A map of the individual treatment cells is presented in Figure 1-3. In 2009, several small berms were created within Cell 1, 11 and 12. The berms were added to promote sheet flow. Small openings in the berms allow water to discharge while increasing the water level upstream of the berms.

In 2015, the City of Orlando upgraded Iron Bridge's Wetland Pump Station that supplies water to the OEW. Thirty-one (31) air release valves (ARVs) were replaced along with the Wetland's pipeline. The Wetland Pump Station was renovated and equipped with new pumps and electrical gear. D002's outfall pipe began leaking and causing erosion behind the recently (2017) installed articulating concrete block channel. In May 2018, D002 outfall's pipe was lined to prevent erosion and leaking.

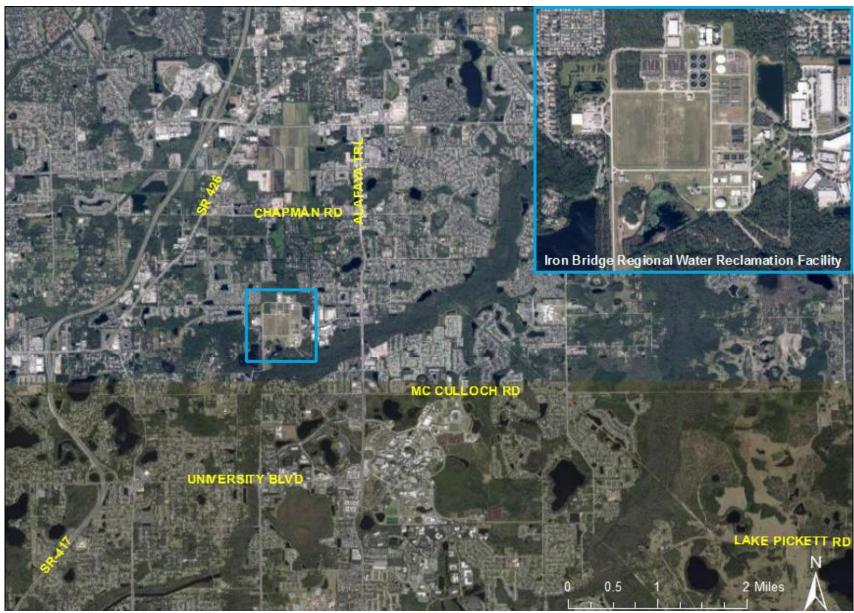


Figure 1-1 Map of Iron Bridge Regional Water Reclamation Facility



Figure 1-2 Map of Orlando Easterly Wetlands

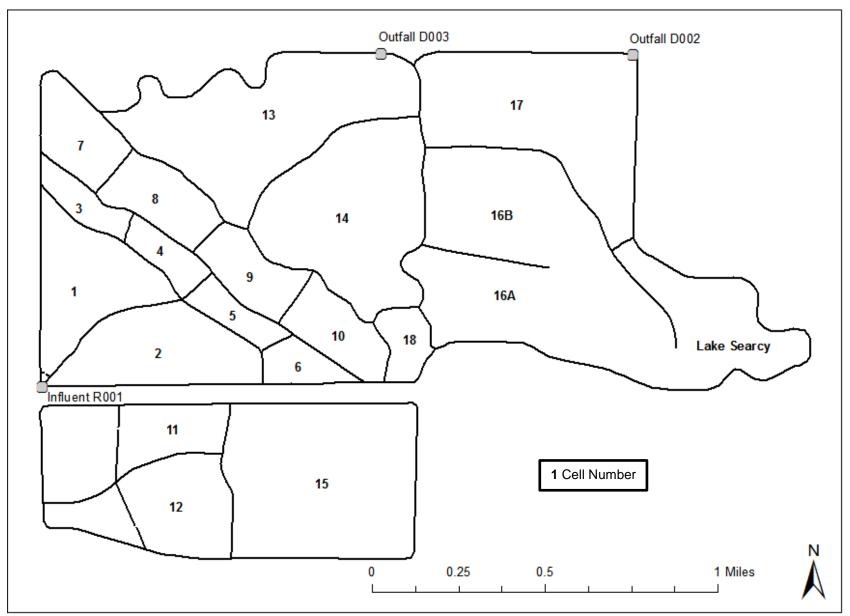


Figure 1-3 Orlando Easterly Wetlands Site Map

2 Iron Bridge Regional Water Reclamation Facility and the Little Econlockhatchee River

2.1 General Overview

The City of Orlando monitors the Little Econlockhatchee River upstream (Econ Up) and downstream (Econ Down) of Iron Bridge. A map of the sampling sites and Iron Bridge are depicted in Figure 2-1. In 2020, there were no adequate USGS discharge monitoring sites for the Little Econlockhatchee River near the Econ Up sampling station. The river, however, is monitored downstream of Iron Bridge at USGS Station 02233475. The station is in Seminole County, Florida on the upstream side of State Highway 434 Bridge, 3.5 miles south of Oviedo and 3.8 miles from Little Econlockhatchee River's mouth. Discharge and gage heights are collected daily at the USGS station. Monthly water quality samples are collected by the City of Orlando at Econ Up and Econ Down (Appendix A and Appendix B, respectively). Iron Bridge's discharge site (D001) is monitored daily by the City of Orlando. In 2020, D001 annual average flow was 3.77 MGD with a total nitrogen (TN) concentration of 2.08 mg/L and a total phosphorus (TP) of 0.201 mg/L.

Water quality data for Econ Up and Econ Down monitoring stations are included in Appendix B and are summarized in Table 2-1. A bar chart comparison of the parameters, both upstream and downstream of Iron Bridge discharge is depicted in Figure 2-2. Figure 2-3 depicts monthly flow rates (in MGD) at D001 and its downstream location on the Little Econlockhatchee River. Figure 2-4 indicates the percent flow comparison of Iron Bridge and the Little Econlockhatchee River. In 2020, Iron Bridge discharge comprised 7.6% of the Little Econlockhatchee River flow. The highest proportion occurred in March, with 17.6% of the flow. From February through May 2020, Iron Bridge contributed over 10% of the proportional low to the Little Econlockhatchee River.

Table 2-1 Summary of 2020 Little Econlockhatchee River Water Quality Data Upstream and Downstream of the Iron Bridge Regional WRF Discharge

Parameter	Upstream of Iron Bridge WRF	Downstream of Iron Bridge WRF	
Total Ammonia	0.05 mg/L	0.06 mg/L	
Total Kjeldahl Nitrogen	Total Kjeldahl Nitrogen 0.57 mg/L		
Nitrate/Nitrite	0.16 mg/L	0.28 mg/L	
Total Nitrogen	0.73 mg/L	0.91 mg/L	
Total Phosphorus	0.068 mg/L	0.083 mg/L	
Carbonaceous Biochemical Oxygen Demand	<2.0 mg/L	<2.0 mg/L	
Dissolved Oxygen	5.47 mg/L	5.05 mg/L	
Chlorophyll-a	1.18 mg/m ³	0.96 mg/m^3	

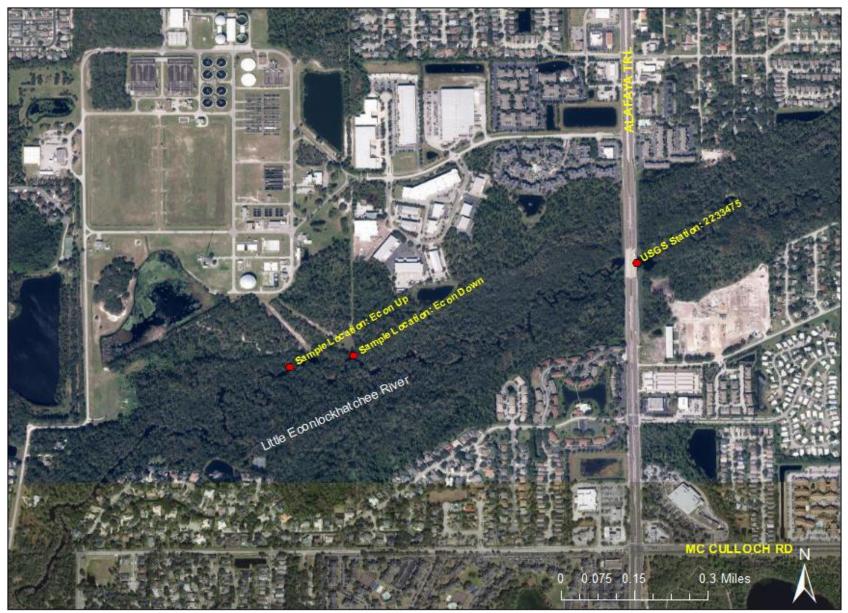


Figure 2-1 Little Econlockhatchee River – Water Quality Sampling Points

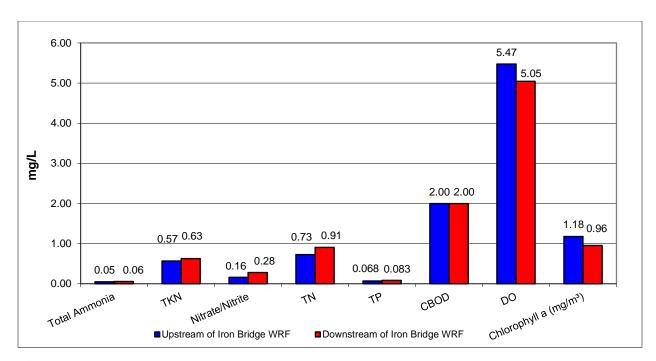


Figure 2-2 2020 Water Quality Upstream and Downstream of the Iron Bridge Regional WRF

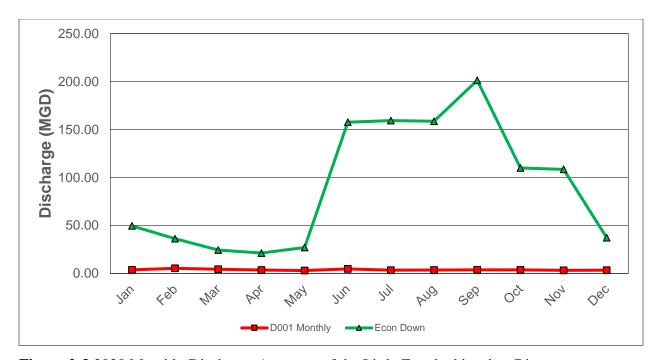


Figure 2-3 2020 Monthly Discharge Averages of the Little Econlockhatchee River

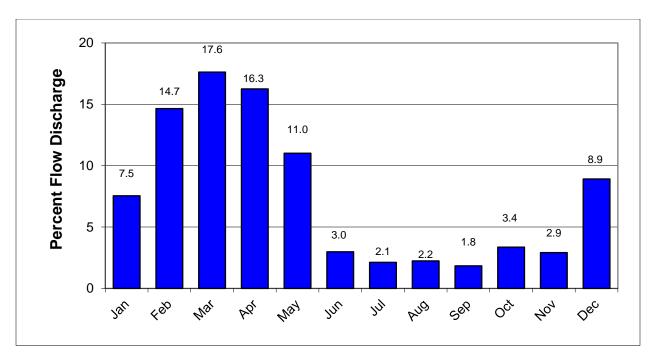


Figure 2-4 2020 Percent Flow from Iron Bridge Regional WRF Discharge to the Little Econlockhatchee River

3 Orlando Easterly Wetlands and the St. Johns River

3.1 General Overview

The City of Orlando monitors the St. Johns River upstream (SJR1) and downstream (SJR5) of OEW monthly. The river is monitored upstream of OEW at State Road 50 near Christmas, Florida at USGS station 02232500 (City Identifier SJR1) and is approximately 3.9 miles south of where OEW discharge canal reaches the St. Johns River. USGS 02234000 (City Identifier SJR5) is located on State Road 46 upstream of Lake Harney and is approximately 9.2 miles from where the OEW discharge canal reaches the St. Johns River. A map of the sampling sites and OEW are depicted in Figure 3-1. River discharge and gage heights are collected daily at the USGS stations and monthly water quality data is collected by the City of Orlando (Appendix A and B, respectively). The St. Johns River gage heights and flow at SJR1 are summarized in Table 3-1. The 2020 OEW average annual discharge was 21.40 MGD while SJR1 had an annual average of 780 MGD. Figure 3-2 depicts 2020 monthly flow rates (in MGD) of OEW and SJR5. SJR5's peak discharge occurred in October 2020 (2593 MGD). Figure 3-3 illustrates the St. Johns River average annual discharge and Orlando Easterly Wetlands discharge. Historically, Orlando Easterly Wetlands has very little impact regarding the discharge of flow to the St. Johns River,

accounting for 1.72% of the total flow. In March 2020, the OEW accounted for 8.98% of the River's total flow. Table 3-2 indicates the monthly discharge rates of OEW and SJR5.

The Orlando Easterly Wetlands effluent had an annual average concentration of 0.65 mg/L total nitrogen (TN) and total phosphorus (TP) 0.050 mg/L. TN and TP concentrations at SJR1, SJR5 and OEW are listed in Table 3-3 and depicted graphically in Figure 3-5 and Figure 3-6. Additionally, Table 3-4 shows a comparison between the TP loadings from OEW, SJR1 and SJR5.

3.2 Iron Bridge Regional WRF and Orlando Easterly Wetlands Combined Nutrient Loadings

The combined annual TN and TP loadings of the outfall at Iron Bridge Regional WRF to the Little Econ and the OEW outfall to the St. Johns River were well below the FDEP permit limits. In 2020, Iron Bridge discharge (D001) was 3.77 MGD with an annual average TN concentration of 2.08 mg/L and TP concentration of 0.201 mg/L. OEW discharged 21.40 MGD with an annual average TN concentration of 0.65 mg/L and TP concentration of 0.050 mg/L. The permit allows 780 lbs/day of TN and 220 lbs/day of TP combined discharge to the St. Johns River system. The 2020 combined outfall loadings for TN and TP, were 23.24% and 6.92%, respectively, of the FDEP maximum allowable loadings to the St. Johns River system. The combined flow (25.17 MGD) from Iron Bridge and the OEW was 39.9% of the 63 MGD permitted total discharge capacity. This data illustrates that the combined discharge is well below the allowable nutrient loading (Table 3-5 and Figure 3-8).

 Table 3-1 Comparison of St. Johns River Gage Heights and Discharge Rates with OEW

Discharge Flows

	Station	Station SJR1 ^(a)				
Year	Gage Height	Discharge Rate	Discharge Rate			
	(ft)	(MGD)	(MGD)			
1988	5.02	560	10.63			
1989	4.34	412	13.91			
1990	4.77	508	10.68			
1991	6.70	1186	13.40			
1992	5.95	996	11.60			
1993	5.12	903	10.00			
1994	5.95	1178	12.52			
1995	6.67	1470	8.83 ^(b)			
1996	5.57	727	16.34			
1997	4.92	775	16.67			
1998	5.98	1263	13.96			
1999	4.31	1318	19.43			
2000	2.38	418	13.69			
2001	4.07	829	16.76			
2002	4.78	1073	16.59			
2003	5.11	956	22.51			
2004	4.81	1098	24.87			
2005	6.35	1488	25.25			
2006	3.39	354	17.63			
2007	3.37	329	14.62			
2008	4.46	1049	15.06			
2009	3.93	625	15.39			
2010	3.66	468	18.96			
2011	3.80	796	17.18			
2012	4.65	1073	18.11			
2013	4.45	1044	19.18			
2014	4.96	1083	18.55			
2015	4.54	598	16.57			
2016	5.62	991	16.16			
2017	4.73	1323	23.94			
2018	4.53	916	26.02			
2019	3.79	824	21.84			
2020	4.81	780	21.40			
Average	4.77	891	16.92			

Gage height and discharge rates at the SJR1 sample station (USGS Station 02232500) are based on data provided by the United States Geological Survey (USGS) (Appendix A).

⁽b) The OEW effluent flow meter was out of service for repair from November 1, 1995, through December 28, 1995. Therefore, this period is not included in the annual average discharge rate.

 Table 3-2 2020 Monthly Comparison of Discharge Rate at SJR5 and OEW

Month	SJR5 Discharge	OEW Discharge
	(MGD)	(MGD)
January	779	22.71
February	482	26.18
March	253	22.74
April	148	9.40
May	151	9.46
June	842	27.15
July	1269	26.10
August	1961	26.46
September	2345	25.25
October	2593	24.26
November	2175	20.57
December	1954	16.68

Table 3-3 Total Nitrogen and Total Phosphorus Concentrations of the OEW and St. Johns River

Year	TN (mg/L)				TP (mg/L)	
	HS10 ^(a)	SJR1 ^(b)	SJR5 ^(c)	HS10	SJR1	SJR5
1988	0.84	0.87	0.87	0.1	0.14	0.15
1989	0.92	0.88	0.89	0.08	0.07	0.07
1990	0.93	1.08	0.89	0.09	0.10	0.08
1991	0.8	1.05	1.09	0.09	0.05	0.12
1992	0.74	1.25	1.05	0.06	0.09	0.11
1993	0.76	1.14	1.00	0.06	0.07	0.09
1994	0.68	1.16	1.06	0.05	0.07	0.08
1995	0.73	1.35	1.23	0.05	0.07	0.08
1996	0.69	1.46	1.30	0.05	0.11	0.09
1997	0.84	1.45	1.28	0.04	0.07	0.07
1998	0.84	1.50	1.39	0.05	0.08	0.09
1999	0.84	1.93	1.44	0.06	0.10	0.11
2000	0.84	2.47	1.93	0.06	0.11	0.09
2001	0.88	2.23	1.91	0.07	0.07	0.11
2002	0.77	2.16	1.77	0.075	0.083	0.116
2003	0.78	1.98	1.51	0.070	0.071	0.078
2004	0.92	1.98	1.49	0.060	0.099	0.092
2005	0.84	1.78	1.37	0.088	0.077	0.080
2006	0.94	2.19	1.76	0.129	0.087	0.104
2007	0.98	2.28	1.73	0.066	0.116	0.100
2008	1.20	2.68	2.35	0.062	0.113	0.106
2009	1.16	2.87	2.14	0.041	0.106	0.093
2010	1.01	2.84	1.92	0.041	0.120	0.088
2011	1.00	2.58	2.10	0.036	0.093	0.088
2012	0.96	2.31	1.99	0.036	0.085	0.084
2013	0.89	2.07	1.86	0.037	0.072	0.073
2014	0.88	1.65	1.42	0.079	0.086	0.088
2015	0.95	1.83	1.19	0.075	0.080	0.046
2016	0.80	1.55	1.28	0.051	0.082	0.075
2017	0.87	1.66	1.42	0.068	0.109	0.106
2018	0.78	1.96	1.29	0.049	0.097	0.059
2019	0.61	1.67	1.28	0.053	0.083	0.079
2020	0.65	1.57	1.18	0.050	0.077	0.068
Average	0.86	1.80	1.47	0.063	0.089	0.089

(a) HS10 – OEW discharge (daily composite sample) TN and TP concentrations are annual averages based on data presented in the monthly DMRs. In 2006, TN and TP concentrations began being measured as weighted averages between D002 and D003

⁽b) SJR1 –Station in the St. Johns River upstream of the OEW at the SR 50 bridge (monthly grab sample)

⁽c) SJR5 – Station in the St. Johns River downstream of the OEW at the SR 46 bridge (monthly grab sample)

Table 3-4 2020 Average Monthly Total Phosphorus Loadings of the OEW Effluent and St. Johns River

		DEW Efflue	nt	SJR1			SJR5		
Month	TP	Flow	TP	TP	Flow	TP	TP	Flow	TP
	(mg/L)	(MGD)	Loading	(mg/L)	(MGD)	Loading	(mg/L)	(MGD)	Loading
			(lbs)			(lbs)			(lbs)
January	0.104	22.71	19.69	0.067	686	383	0.053	779	344
February	0.081	26.18	17.69	0.084	312	218	0.063	482	253
March	0.066	22.74	12.53	0.084	139	97	0.066	253	139
April	0.037	9.40	2.91	0.060	69	35	0.093	148	115
May	0.036	9.46	2.87	0.079	75	50	0.101	151	127
June	0.040	27.15	9.16	0.108	499	450	0.063	842	443
July	0.051	26.10	11.04	0.091	807	613	0.059	1269	624
August	0.044	26.46	9.67	0.090	1059	795	0.080	1961	1309
September	0.041	25.25	8.65	0.078	1260	820	0.064	2345	1252
October	0.037	24.26	7.44	0.062	1646	851	0.066	2593	1427
November	0.034	20.57	5.79	0.077	1374	882	0.069	2175	1251
December	0.031	16.68	4.32	0.048	1423	569	0.042	1954	684

Table 3-5 2020 Nutrient Loadings from the Iron Bridge Regional WRF and OEW

	Average Daily Discharge Rate	Average Daily Total Nitrogen		Average Total Pho	
	(MGD)	(mg/L)	(lbs)	(mg/L)	(lbs)
From Iron Bridge Regional WRF to Little Econ ^(a)	3.77	2.08	65.24	0.201	6.31
From OEW to St. Johns River ^(b)	21.40	0.65	116.01	0.050	8.92
Weighted Total Discharge			181.25		15.23
Total	25.17				
FDEP Permit	63		780		220

⁽a) Flow discharged from the Iron Bridge Regional WRF (D001) to the Little Econlockhatchee (Little Econ).

⁽b) Flow discharged from the OEW system (D002 and D003).

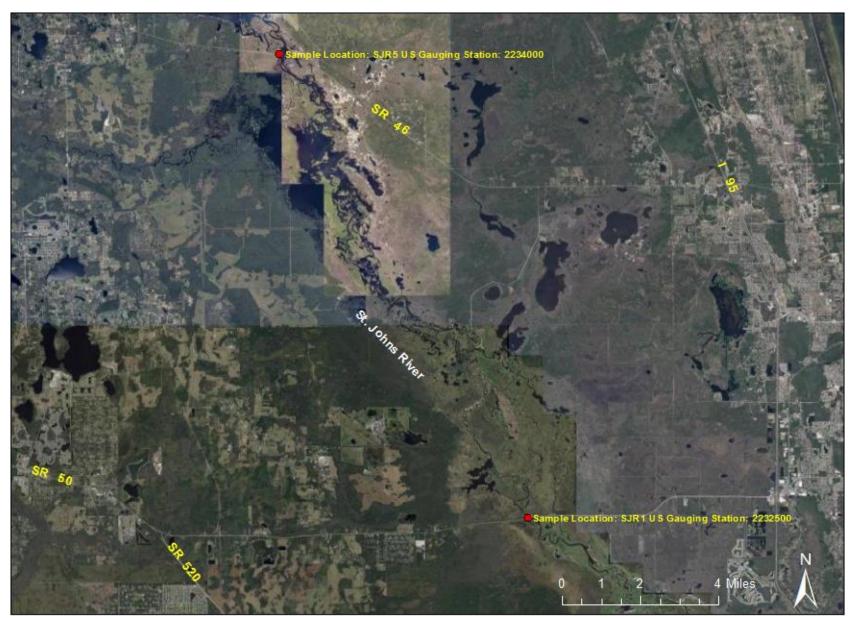


Figure 3-1 St. Johns River – Water Quality Sampling Points

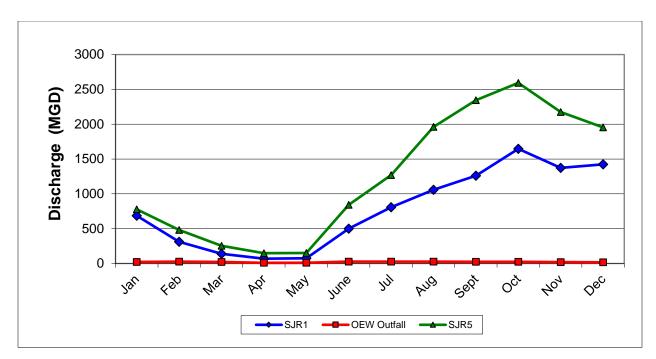


Figure 3-2 2020 Monthly Discharge Averages of the St. Johns River

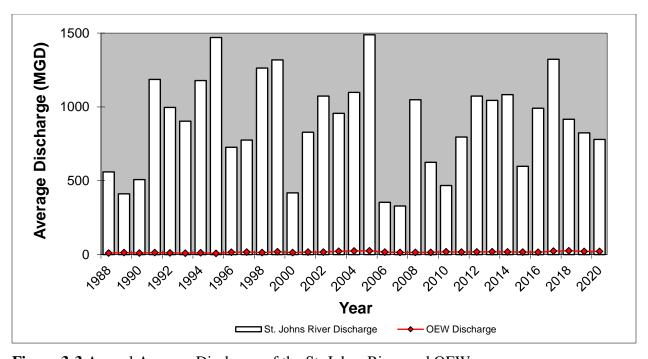


Figure 3-3 Annual Average Discharge of the St. Johns River and OEW

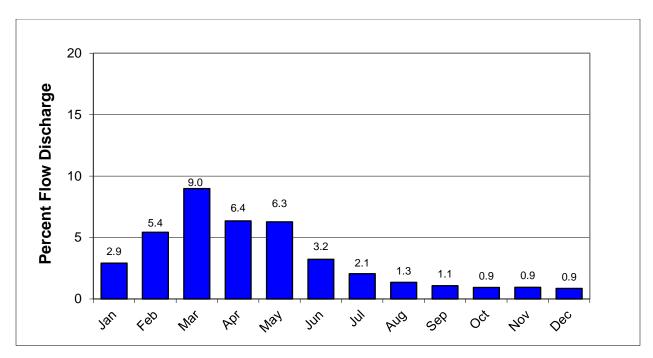


Figure 3-4 2020 Percent Flow Discharge from the Orlando Easterly Wetlands to the St. Johns River

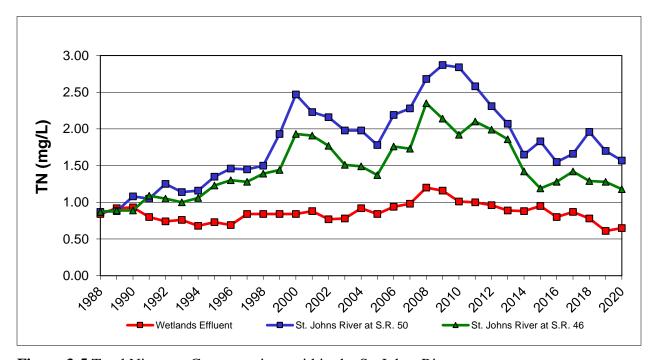


Figure 3-5 Total Nitrogen Concentrations within the St. Johns River

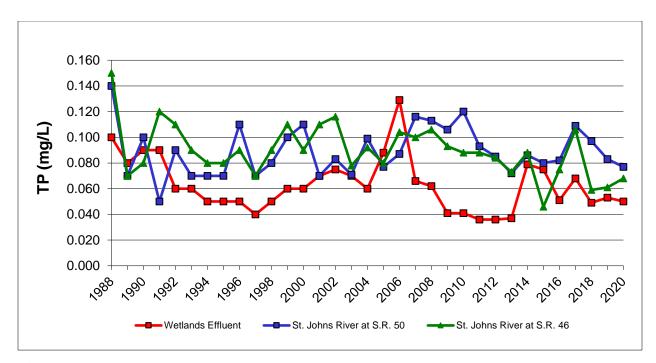


Figure 3-6 Total Phosphorus Concentrations within the St. Johns River

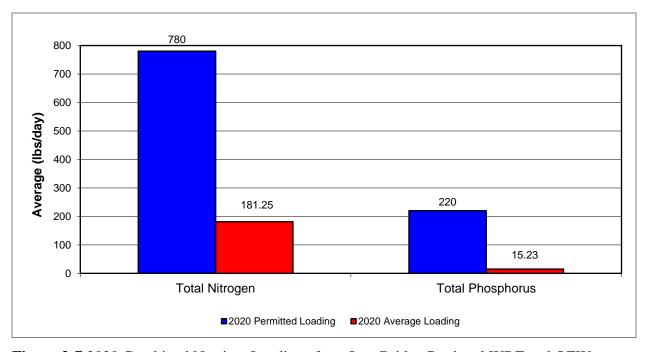


Figure 3-7 2020 Combined Nutrient Loadings from Iron Bridge Regional WRF and OEW

4 Orlando Easterly Wetlands

4.1 OEW Management

The OEW has 67 control structures, including bidirectional flow control structures, which allow water to be diverted across the OEW (Figure 4-1). Several of these control structures and groundwater sampling wells are listed in the FDEP operation permit as compliance sampling locations. The FDEP required compliance sampling stations associated with each of the 5 strata are as follows:

- Station WP1 (referred to as stations R001 in the FDEP permit) represents the OEW influent.
- Stratum 1 includes Cells 1, 2, 11 and 12. The FDEP operating permit is sampled at WP2 (WL11X) and WP3 (WL1Y).
- Stratum 2 includes Cell 3, 4, 5 and 6. The FDEP operating permit is sampled at WP4 (WL4X) and WP5 (WL3A)
- Stratum 3 includes Cell 7, 8, 9, 10 and 15. The FDEP operating permit is sampled at WP6 (WL8X) and MM7 (WL15X)
- Stratum 4 includes Cell 13, 14 and 18. The FDEP operating permit is sampled and is sampled at MM8 (WL13X)
- Stratum 5 includes Cells 16A, 16B, 17 and Lake Searcy. The FDEP operating permit is sampled at WLHS9 (Lake Searcy).
- Station WLHS10 (referred to as station D002 in the FDEP permit) represents the OEW outfall.

OEW is divided into 3 distinct flow paths: northern, central and southern flow train (Figure 4-2). All the flow entering the OEW can be diverted through any of the three flow paths. Typically, all three flow paths are open and receive 1/3 of the flow entering the OEW. Figure 4-3 depicts when each cell was demucked. During dumucking renovations a cell is drained, the accumulated organic material is removed, the cell is then reflooded and beneficial plants are reintroduced.

In 2019, part of Cell 16A was filled to create a foundation pad for a proposed visitor center/office building. Because of the development, WL18C was permitted by FDEP to be relocated north of WL18B. On April 27, 2020, WL18C was moved and put back in service.

Several times a year, the weir control structures at OEW are cleared of vegetation and debris. Certain cells which have numerous dead trees are often cleared of limbs, branches and logs to ensure proper flow of water through the OEW. In front of D002 outfall, a containment boom was installed in as a floating mat exclusion device. The installation successfully prevents water lettuce (*Pistia stratoides*) from going into the St. Johns River as well as containing other floating debris. Herbicide treatment is the primary means of invasive vegetation control at the OEW; focusing on dominant species cattails (*Typha* spp.) and water lettuce. Vegetation control not only promotes diverse habitat but ensures a healthy system for water quality standards. In 2020, 136 hours were spent in aquatic herbicide application. Although spraying is occasionally used throughout the OEW system, most applications were focused on Cell 13, 14, 16A, 16B, 17 and Lake Searcy.

In 2015, OEW began rehabilitating the control structures as well as upgrading staff gages from horizontal survey datum NAD 27 to NAD 83. Table 4-1 includes a list of the control structures which have yet to be updated. Most of the control structures were updated mid-year of 2019 so 2020 OEW Monthly Water Quality and Performance Data (Appendix C) includes water level, except for Cell 13. Table 4-2 lists the documented flow changes throughout the year.

4.2 Analytes and Nutrients

The OEW performance data for January 2020 through December 2020, are presented in Appendices C. Appendix D includes semiannual metals, volatile organic compounds (VOC), polychlorinated biphenyls (PCB) and organochlorine pesticide monitoring data. FDEP permit designates these samples to be collected at locations: WP1, WL11X, WL15X, HS9 and HS10. In 2020, Cell 11 was being used in a biogeochemistry study and was put offline and dewatered. WL12Y was sampled as an alternate location instead.

Results for in semiannual metals sampling events show the presence of boron, barium, calcium, magnesium, manganese and nickel throughout the year and at least in 80% of the sampling events. Aluminum was present at WL15X and HS10 (67.2 ug/L and 195 ug/L, respectively) on May 5, 2020, however, not present at either location during the second sampling event. Zinc was present in both semiannual sampling events at WP1; however, it was below method detection limit (MDL) concentration at the other locations. VOCs sampling using the EPA Method 624.1, indicated a presence of chloroform at WP1 during both sampling events (86 ug/L and 85 ug/L, respectively). In May 2020, dichlorobromoethane was present (32 ug/L) at WP1, however, it was below MDL on the second collection event and not present at the other locations. Additionally, EPA Method 608.3 indicated no organochlorine pesticide and PCB presence.

4.2.1 Nitrogen

Historical TN loadings and reduction performance are presented in Table 4-3. TN data are summarized in Tables 4-4, 4-5 and 4-6 for the northern, southern and central flow trains, respectively.

Influent (R001) TN concentration has been consistently below the permit's allowable annual influent concentration of 6 mg/L. In 2020, all water samples collected at the Wetlands influent were below the TN allowable permitted concentration limit. The historical TN average and 2020 TN average concentration profiles through the OEW flow trains are illustrated in Figure 4-4, 4-5 and 4-6. The northern and southern flow trains historical averages are collected from 1988 – 2019. Central flow train's historical average is calculated from 2002 – 2019; the years that the central flow train has been monitored.

Discharge from OEW had a TN annual average of 0.65 mg/L with a TN loading of 116.01 lbs/day. This average is well below the FDEP concentration limit of 2.31 mg/L. In 2020, OEW TN percent loading reduction from influent to effluent was 56.8% (Table 4-3). The 2020 annual average TN concentration from the OEW was well below the FDEP permit limit for discharge to the St. Johns River system, and the data continues to support the consistency of the OEW performance over time.

4.2.2 Phosphorus

R001 TP concentration has been consistently below the permit's allowable annual influent concentration of 0.75 mg/L. However, on July 8 and July 14, 2020, samples collected at the Wetlands influent were above the allowable permitted concentration limit (0.766 and 0.813, respectively). Historical TP loadings and reduction performances are presented in Table 4-7. Water quality data related to TP for the northern, southern, and central flow train are summarized in Tables 4-8, 4-9 and 4-10, respectively. The TP concentration profiles for northern, southern and central flow trains are measured at specific distances throughout the OEW for all three flow paths are depicted in Figures 4-7, 4-8 and 4-9. The monthly average concentration of TP entering and exiting the OEW is depicted in Figure 4-10.

Discharge from OEW had a TP annual average of 0.050 mg/L with a TP loading of 8.92 lbs/day. This average is well below the FDEP concentration limit of 0.200 mg/L. In 2020, OEW TP percent loading reduction from influent to effluent was 67.1% (Table 4-7). The 2020 annual average TP concentration from the OEW was well below the FDEP permit limit for discharge to the St. Johns River system

4.2.3 Dissolved Oxygen

The average monthly dissolved oxygen (DO) concentrations for the OEW are shown in Table 4-11. The measurements were collected daily at D002 and D003 (when flowing). The daily measurements that were used to calculate the monthly originate from Discharge Monitoring Reports that were submitted to FDEP throughout the year. In 2020, the annual average DO concentration was 5.2 mg/L.

Figure 4-11 depicts the D002's daily DO concentration in comparison to the FDEP target concentration. From 1987 through 2015, FDEP permit listed DO concentrations with seasonal limitations based on wet and dry seasons (1.5 mg/L and 3.8 mg/L, respectively). In 2015, DO requirements were increased to a minimum annual average of 5.0 mg/L. On October 22, 2020, FDEP permit renewal date of issuance, DO minimum annual average concentration decreased to 3.8 mg/L.

4.3 Water Budget

The 2020 water budget for the OEW was estimated using the following water balance equation.

OEW Discharge = OEW Influent + Rainfall-Evapotranspiration-Percolation

Rainfall data for 2020 is presented in Table 4-12. In 2017, rainfall data began being collected using the St. Johns River Water Management District's WSR-88 NexRad Radar data for the Orlando Easterly Wetlands perimeter. OEW's 2020 total rainfall was 55.48 inches falling over the 1,190-acre property, which equates to an average of approximately 4.91 MGD. Approximately 20% of OEW's 2020 annual rainfall occurred in September (11.16 in (Table 4-12). Losses from the OEW occur through evapotranspiration and percolation. Soils at the OEW have low permeability, therefore the primary mechanism for water loss are evaporation and transpiration. Using the water balance equation, there was a net increase of 0.84 MGD in 2020 (Table 4-13).

Table 4-1 OEW Control Structures with NAD 27 Water Levels

WL13B	WL13D	WL13Y	WL14C
WL13C	WL13X	WL14B	

Table 4-2 2020 OEW Control Structure Weir Board and Gate Manipulations

Date	Weir Board	Reason
	(WL)/Gate	
1/14/20	WL15X	Removed 1 board to lower flows in Cell 11 for dry down research.
4/27/20	WL18C	Relocated and reestablished control structure flow due to new Visitor Center construction.
12/7/20	WL15X	Removed 1 board to lower flows in Cell 15 for migratory waterfowl.
1215/20	WL7X	Removed 1 board to increase water flow into Cell 13

Table 4-3 Historical Total Nitrogen Loadings and Reductions Within the OEW

Year	Influent Flow (MGD)	Influent Conc. (mg/L)	Loading in (lbs/day)	Effluent Flow (MGD)	Effluent Conc. (mg/L)	Loadings Out (lbs/day)	Percent Reduction from Influent to Effluent
1991	12.90	2.44	262.51	13.40	0.80	89.40	65.9%
1992	12.77	2.74	291.81	11.60	0.74	71.59	75.5%
1993	12.63	2.24	235.95	10.00	0.78	65.05	72.4%
1994	12.42	2.29	237.20	12.52	0.76	79.36	66.5%
1995	15.12	1.96	247.16	8.83	0.68	50.08	79.7%
1996	15.63	1.43	186.41	16.34	0.73	99.48	46.6%
1997	15.22	1.45	184.06	16.67	0.69	95.93	47.9%
1998	14.22	1.82	215.84	13.93	0.84	97.59	54.8%
1999	17.20	2.42	347.14	19.43	0.84	136.12	60.8%
2000	17.45	1.81	263.41	13.69	0.84	95.91	63.6%
2001	17.86	2.14	318.76	16.76	0.88	123.00	61.4%
2002	16.59	1.42	196.47	22.51	0.77	144.55	26.4%
2003	17.36	1.23	178.08	24.87	0.78	161.78	9.2%
2004	17.20	1.44	206.57	21.48	0.92	164.81	20.2%
2005	18.27	1.67	254.46	25.25	0.84	176.89	30.5%
2006 ^(a)	12.68	1.61	170.26	17.63	0.94	138.21	18.8%
2007	12.33	2.38	244.74	14.62	0.98	119.49	51.2%
2008	12.17	2.25	228.37	15.06	1.20	150.72	34.0%
2009	14.14	1.90	224.06	15.39	1.16	148.89	33.6%
2010	15.29	1.94	247.39	18.96	1.01	159.71	35.4%
2011	15.17	2.07	261.89	17.18	1.00	143.28	45.3%
2012	14.33	1.77	211.54	18.11	0.96	145.00	31.5%
2013	14.16	1.70	200.76	19.18	0.89	142.37	29.1%
2014	14.32	1.40	167.20	18.55	0.88	136.14	18.6%
2015	11.80 ^(b)	1.35	132.86	16.57	0.95	131.28	1.2%
2016	12.95	1.66	179.28	16.16	0.80	107.82	39.9%
2017	15.30	2.07	264.14	23.94	0.87	173.70	34.2%
2018	15.75	2.00	262.71	26.02	0.78	169.27	35.6%
2019	16.40	1.88	257.14	21.84	0.61	111.11	56.8%
2020	15.65	1.94	253.21	21.40	0.65	116.01	56.8%
Average	14.84	1.88	231.05	17.60	0.85	124.82	43.4%

⁽a) In 2006, effluent flow and effluent concentrations began being measured as the weighted averages of D002 and D003.

⁽b) On 3/11/2015, R001 flow was collected, however, there was no sample collected thus flow was not added to this MGD average.

 Table 4-4 Summary of Total Nitrogen Concentration Profile Through the

Northern Flow Train (mg/L)

	Station ^(a)								
Year	Influent WP1	Stratum 1 WP3	Stratum 2 WP4/5 ^(b)	Stratum 3 WP6	Stratum 4 MM8	Final Outfall HS10			
1988	4.18	1.53	1.51	1.27	0.96	0.84			
1989	5.52	1.92	1.74	1.59	1.22	0.92			
1990	2.83	0.98	1.00	1.09	1.19	0.93			
1991	2.44	2.20	1.02	1.11	1.25	0.80			
1992	2.74	1.01	0.99	0.93	0.88	0.74			
1993	2.24	0.71	0.72	0.75	1.07	0.78			
1994	2.29	1.07	0.92	0.81	0.95	0.76			
1995	1.96	1.14	0.90	0.79	0.77	0.68			
1996	1.43	1.09	0.95	0.84	1.10	0.73			
1997	1.45	0.87	0.76	0.67	0.96	0.69			
1998	1.82	1.01	0.85	0.80	0.86	0.84			
1999	2.42	1.32	1.04	0.92	0.97	0.84			
2000	1.81	0.80	0.77	0.68	0.80	0.84			
2001	2.14	1.15	1.02	1.30	1.04	0.88			
2002 ^(c)	1.42	0.80	0.73	0.80	0.97	0.77			
2003	1.23	0.72	0.77	0.95	1.12	0.78			
2004	1.44	1.19	1.09	0.92	1.04	0.92			
2005	1.67	1.13	1.19	1.17	0.95	0.84			
2006 ^(d)	1.61	1.03	0.95	1.02	1.08	0.94			
2007	2.38	0.80	0.86	0.96	0.97	0.98			
2008	2.25	1.03	1.08	1.10	ND ^(e)	1.20			
2009 ^(f)	1.90	1.10	1.07	1.17	ND ^(e)	1.16			
2010	1.94	0.95	0.99	1.24	1.68	1.01			
2011	2.07	0.92	0.97	1.04	1.05	1.00			
2012	1.77	0.87	0.85	0.91	1.26	0.96			
2013 ^(g)	1.70	0.87	0.87	0.91	1.06	0.89			
2013 2014 ^(h)	1.40	0.69	0.70	0.75	0.88	0.88			
2015	1.35	0.69	0.76	0.78	1.06	0.95			
2016	1.66	0.67	0.69	0.70	0.90	0.80			
2017	2.07	0.60	0.63	0.76	0.86	0.87			
2018	2.00	0.76	0.72	0.89	0.86	0.78			
2019 ⁽ⁱ⁾	1.88	0.65	0.65	ND	ND	0.61			
2020	1.94	0.56	0.55	0.61	0.73	0.65			
Average	2.09	0.99	0.92	0.94	1.02	0.86			

⁽a) Averages for Stations WP1 and HS10 are from data presented in Appendix B. Other stations are from data presented in Appendix A.

⁽b) WP4/5 represents the average of stations WP4 and WP5, assuming equal flow through each control structure.

⁽c) The northern flow train was offline during much of 2002.

⁽d) In 2006, TN concentrations began being measured at HS10 as the weighted averages between D002 and D003.

⁽e) MM8 was offline; no data available.

⁽f) TN results do not include data collected for the drawdown experiment

⁽g) TN results do not include data from May 2013 through December 2013, which was collected for the pulsing study.

⁽h) Beginning in 2014, TN results for Stratum 1 through 4 compiled by averaging TN each month prior to finding the annual TN.

⁽i) Stratum 3 and 4 were offline from April – December 2019, due to demucking project of Cell 13.

 Table 4-5 Summary of Total Nitrogen Concentration Profile Through the

Southern Flow Train (mg/L)

	Station ^(a)								
Year	Influent WP1	Stratum 1 WP2	Stratum 3 MM7	Lake HS9	Final Outfall HS10				
1000	4.10	1.47	0.04	0.00	0.04				
1988	4.18	1.47	0.84	0.99	0.84				
1989	5.52	1.47	1.03	0.81	0.92				
1990	2.83	1.01	0.85	0.85	0.93				
1991	2.44	0.94	0.69	0.63	0.80				
1992	2.74	1.09	0.69	0.78	0.74				
1993	2.24	1.07	0.61	0.89	0.78				
1994	2.29	0.90	0.77	0.84	0.76				
1995	1.96	0.82	0.65	0.70	0.68				
1996	1.43	0.75	0.63	0.85	0.73				
1997 ^(b)	1.45	0.99	0.76	0.89	0.69				
1998 ^(b)	1.82	1.08	0.79	0.78	0.84				
1999	2.42	0.76	0.81	0.77	0.84				
2000	1.81	0.80	0.66	0.73	0.84				
2001	2.14	0.86	0.77	0.92	0.88				
2002	1.42	1.01	0.71	0.90	0.77				
2003	1.23	1.15	0.79	0.93	0.78				
2004	1.44	0.96	0.74	0.84	0.92				
2005	1.67	1.09	0.69	0.93	0.84				
2006 ^(c)	1.61	0.88	0.89	1.06	0.94				
2007	2.38	0.90	0.78	1.40	0.98				
2008	2.25	1.26	1.12	2.83	1.20				
2009	1.90	1.17 ^(d)	1.18	1.18	1.16				
2010	1.94	0.89	0.95	1.01	1.01				
2011	2.07	1.06	0.99	0.98	1.00				
2012	1.77	1.01	1.03	0.80	0.96				
2013 ^(e)	1.70	1.10	0.86	1.12	0.89				
2014 ^(f)	1.40	1.13	1.96	1.30	0.88				
2015	1.35	0.94	0.84	1.22	0.95				
2016 ^(g)	1.66	ND	ND	1.05	0.80				
2017	2.07	0.67	0.68	0.95	0.87				
2018	2.00	0.83	0.79	1.07	0.78				
2019	1.88	0.77	0.70	0.81	0.61				
2020 ^(h)	1.94	0.57	1.15	0.71	0.65				
Average	2.09	0.98	0.86	0.99	0.86				

⁽a) Averages for Stations WP1 and HS10 are from data presented in Appendix B. Other stations are from data presented in Appendix A.

⁽b) Southern flow train was offline from August 1997 through March 1998 for the capacity study.

⁽c) In 2006, TN concentrations began being measures at HS10 as the weighted averages between D002 and D003.

⁽d) WP2 was offline from January 2009 through June 2009, due to the renovation project.

⁽e) Southern flow train was offline from May 2013 through December 2014 for the pulsing study

⁽f) Beginning in 2014, TN results for Stratum 1 through 4 compiled by averaging TN each month prior to finding the annual TN.

⁽g) Southern Flow Train was offline from November 2015 through November 2016, due to demucking Cell 15.

⁽h) Cell 11 was offline in 2020, due to a biogeochemistry study. Mean TN was from WL12X and WL12Y.

Table 4-6 Summary of Total Nitrogen Concentration Profile Through the

Central Flow Train (mg/L)

	Station ^(a)							
Year	Influent WP1	Stratum 1	Stratum 2	Stratum 3	Stratum 4	Stratum 5	Final Outfall HS10	
2002	1 12	0.00	0.72	0.00	0.07	0.00	0.77	
2002	1.42	0.80	0.73	0.80	0.97	0.90	0.77	
2003	1.23	0.72	0.64	0.67	0.88	0.93	0.78	
2004	1.44	0.69	0.64	0.69	1.09	0.84	0.92	
2005	1.67	0.76	0.72	0.65	0.93	0.93	0.84	
2006 ^(b)	1.61	0.71	0.68	0.64	0.94	1.06	0.94	
2007	2.38	0.83	0.77	0.68	0.94	1.40	0.98	
2008	2.25	1.08	1.19	1.06	1.28	2.83	1.20	
2009 ^(c)	1.90	1.11	1.00	0.91	1.08	1.18	1.16	
2010	1.94	1.20	1.01	1.01	1.24	1.01	1.01	
2011	2.07	1.14	1.07	0.94	1.14	0.98	1.00	
2012	1.77	0.99	0.92	0.88	0.88	0.80	0.96	
2013 ^(d)	1.70	0.92	0.92	0.88	1.06	1.12	0.89	
2014 ^(e)	1.40	0.78	0.80	0.80	0.96	1.30	0.88	
2015	1.35	0.68	0.70	0.71	0.92	1.22	0.95	
2016	1.66	0.76	0.68	0.66	0.81	1.05	0.80	
2017	2.07	0.64	0.60	0.60	0.79	0.95	0.87	
2018 ^(f)	2.00	0.82	0.81	0.79	ND	1.07	0.78	
2019	1.88	0.58	0.61	0.66	0.82	0.81	0.61	
2020	1.94	0.54	0.53	0.50	0.84	0.71	0.65	
Average	1.77	0.83	0.79	0.76	0.98	1.11	0.89	

⁽a) Averages for Stations WP1 and HS10 are from data presented in Appendix B. Other stations are from data presented in Appendix A.

⁽b) In 2006, TN concentrations began being measured at HS10 as the weighted averages between D002 and D003.

⁽c) TN results do not include data collected for the drawdown experiment.

⁽d) TN results do not include data from May 2013 through December 2013, which was collected for the pulsing study

⁽e) Beginning in 2014, TN results for Stratum 1 through 4 compiled by averaging TN each month prior to finding the annual TN.

⁽f) Stratum 4 (Cell 14) was offline from April 2018 through January 2019 due to the demucking project.

Table 4-7 Total Phosphorus Loadings and Reductions Within the OEW

Year	Influent Flow (MGD)	Influent Conc. (mg/L)	Influent Loading (lbs/day)	Effluent Flow (MGD)	Effluent Conc. (mg/L)	Effluent Loading (lbs/day)	TP Reduction from Influent to Effluent (%)
1991	12.90	0.23	24.74	13.40	0.09	10.06	59.4%
1992	12.77	0.24	25.56	11.60	0.06	5.80	77.3%
1993	12.63	0.18	18.96	10.00	0.06	5.00	73.6%
1994	12.42	0.20	20.72	12.52	0.05	5.22	74.8%
1995	15.12	0.18	22.70	8.83	0.05	3.68	83.8%
1996	15.63	0.12	15.64	16.34	0.05	6.81	56.4%
1997	15.22	0.14	17.77	16.67	0.04	5.56	68.7%
1998	14.22	0.14	16.13	13.93	0.05	6.27	61.1%
1999	17.20	0.32	45.90	19.43	0.06	9.72	78.8%
2000	17.45	0.30	43.66	13.69	0.06	6.85	84.3%
2001	17.86	0.24	35.75	16.76	0.070	9.78	72.6%
2002	16.59	0.235	32.51	22.51	0.075	14.08	56.7%
2003	17.36	0.207	29.97	24.87	0.070	14.52	51.6%
2004	17.20	0.240	34.48	21.48	0.060	10.75	68.8%
2005	18.27	0.401	61.10	25.25	0.088	18.53	69.7%
2006 ^(a)	12.68	0.330	35.22	17.63	0.129	18.97	46.1%
2007	12.33	0.276	28.38	14.62	0.066	8.05	71.6%
2008	12.17	0.210	21.31	15.06	0.062	7.79	63.5%
2009	14.14	0.153	18.04	15.39	0.041	5.26	70.8%
2010	15.29	0.134	17.09	18.96	0.041	6.48	62.1%
2011	15.17	0.159	20.16	17.18	0.036	5.16	74.4%
2012	14.33	0.194	23.19	18.11	0.036	5.44	76.5%
2013	14.16	0.285	33.66	19.18	0.037	5.92	82.4%
2014	14.32	0.464	55.41	18.55	0.079	12.22	77.9%
2015	11.80 ^(b)	0.247	24.31	16.57	0.075	10.36	57.4%
2016	12.95	0.295	31.86	16.16	0.051	6.87	78.4%
2017	15.30	0.146	18.63	23.94	0.068	13.58	27.1%
2018	15.75	0.154	20.23	26.02	0.049	10.63	47.4%
2019	16.40	0.311	42.54	21.84	0.053	9.65	77.3%
2020	15.65	0.208	27.15	21.40	0.050	8.92	67.1
Average	14.84	0.231	28.76	17.60	0.060	8.93	67.3%

⁽a) In 2006, effluent flow and effluent concentrations began being measured as the weighted averages of D002 and D003

⁽b) On 3/11/2015, R001 flow was collected, however, there was no sample collected. The flow was not added to this MGD average.

 Table 4-8 Summary of Total Phosphorus Concentration Profile Through the

Northern Flow Train (mg/L)

	Station ^(a)									
Year	Influent WP1	Stratum 1 WP3	Stratum 2 WP4/5 ^(b)	Stratum 3 WP6	Stratum 4 MM8	Final Outfall HS10				
1988	0.57	0.10	0.10	0.11	0.09	0.10				
1989	0.72	0.08	0.07	0.07	0.05	0.08				
1990	0.41	0.16	0.14	0.11	0.05	0.09				
1991	0.23	0.37	0.12	0.11	0.06	0.09				
1992	0.24	0.10	0.08	0.07	0.05	0.06				
1993	0.18	0.07	0.07	0.06	0.07	0.06				
1994	0.20	0.06	0.06	0.05	0.05	0.05				
1995	0.18	0.07	0.06	0.05	0.04	0.05				
1996	0.12	0.13	0.07	0.09	0.06	0.05				
1997	0.14	0.11	0.07	0.08	0.04	0.04				
1998	0.14	0.08	0.06	005	0.04	0.05				
1999	0.32	0.26	0.21	0.16	0.11	0.06				
2000	0.30	0.19	0.21	0.16	0.04	0.06				
2001	0.24	0.21	0.19	0.31	0.07	0.07				
2002 ^(c)	0.235	0.20	0.17	0.17	0.13	0.075				
2003	0.207	0.030	0.030	0.030	0.055	0.070				
2004	0.240	0.165	0.106	0.040	0.050	0.060				
2005	0.401	0.275	0.315	0.210	0.100	0.088				
2006 ^(d)	0.333	0.236	0.194	0.133	0.190	0.129				
2007	0.276	0.139	0.146	0.089	0.101	0.066				
2008	0.210	0.140	0.123	0.081	ND ^(e)	0.062				
2009 ^(f)	0.015	0.103	0.087	0.080	ND ^(e)	0.041				
2010	0.134	0.069	0.049	0.072	0.117	0.041				
2011	0.159	0.013	0.062	0.043	0.082	0.036				
2012	0.194	0.177	0.128	0.054	0.053	0.036				
2013 ^(g)	0.284	0.338	0.351	0.230	0.042	0.037				
2014 ^(h)	0.464	0.426	0.328	0.280	0.201	0.079				
2015	0.247	0.310	0.282	0.229	0.309	0.075				
2016	0.295	0.261	0.246	0.182	0.144	0.051				
2017	0.146	0.171	0.152	0.142	0.137	0.068				
2018	0.154	0.126	0.117	0.104	0.100	0.049				
2019 ⁽ⁱ⁾	0.311	0.258	0.228	ND	ND	0.053				
2020	0.208	0.145	0.124	0.140	0.073	0.050				
Average	0.262	0.169	0.144	0.118	0.090	0.063				

Averages for Stations WP1 and HS10 are from data presented in Appendix B. Other stations are from data presented in Appendix A. From 1998 through 2002, the TP detection limit was 0.04 mg/L; values lower than the detection limit was reported as 0.04 mg/L.

⁽b) WP4/5 represents the average of stations WP4 and WP5, assuming equal flow through each control structure.

⁽c) The northern flow train was offline during much of 2002.

⁽d) In 2006, effluent flow and effluent concentrations began being measured as the weighted averages of D002 and D003.

⁽e) MM8 was offline; no data available

⁽f) TP results do not include collected for the drawdown experiment

⁽g) TP results do not include data from May 2013 through December 2013, which was collected for the pulsing study.

⁽h) Beginning in 2014, TP results for Stratum 1 through 4 compiled by averaging TN each month prior to finding the annual TP.

⁽i) Stratum 3 and 4 were offline from April – December 2019, due to demucking project of Cell 13.

Table 4-9 Summary of Total Phosphorus Concentration Profile Through the

Southern Flow Train (mg/L)

			Station ^(a)		
Year	Influent WP1	Stratum 1 WP2	Stratum 3 MM7	Lake HS9	Final Outfall HS10
1988	0.57	0.09	0.05	0.13	0.10
1989	0.72	0.11	0.08	0.05	0.08
1990	0.41	0.16	0.11	0.11	0.09
1991	0.23	0.09	0.07	0.09	0.09
1992	0.24	0.08	0.06	0.06	0.06
1993	0.18	0.06	0.05	0.05	0.06
1994	0.20	0.05	0.04	0.03	0.05
1995	0.18	0.04	0.04	0.05	0.05
1996	0.12	0.11	0.05	0.05	0.05
1997 ^(b)	0.14	0.05	0.06	0.06	0.04
1998 ^(b)	0.14	0.06	0.04	0.05	0.05
1999	0.32	0.08	0.12	0.06	0.06
2000	0.30	0.07	0.09	0.07	0.06
2001	0.24	0.19	0.11	0.10	0.07
2002	0.235	0.13	0.12	0.08	0.075
2003	0.207	0.141	0.103	0.076	0.070
2004	0.240	0.150	0.130	0.040	0.060
2005	0.401	0.350	0.180	0.060	0.088
2006 ^(c)	0.333	0.335	0.264	0.219	0.129
2007	0.276	0.314	0.124	0.172	0.066
2008	0.210	0.246	0.119	0.275	0.062
2009	0.153	0.045 ^(d)	0.112	0.056	0.041
2010	0.134	0.032	0.039	0.037	0.041
2011	0.159	0.042	0.037	0.033	0.036
2012	0.194	0.046	0.038	0.035	0.036
2013 ^(e)	0.284	0.126	0.084	0.056	0.037
2014 ^(f)	0.464	0.244	0.416	0.104	0.079
2015	0.247	0.263	0.278	0.070	0.075
2016 ^(g)	0.295	ND	ND	0.048	0.051
2017	0.146	0.089	0.043	0.065	0.068
2018	0.154	0.083	0.030	0.043	0.049
2019	0.311	0.245	0.058	0.051	0.053
2020 ^(h)	0.208	0.157	0.144	0.035	0.050
Average	0.262	0.134	0.103	0.076	0.063

Averages for Stations WP1 and HS10 are from data presented in Appendix B. Other Stations are from data presented in Appendix A. From 1998 through 2002, the TP detection limit was 0.04 mg/L; values lower than the detection limit was reported as 0.04 mg/L.

⁽b) Southern flow train was offline from August 1997 through March 1998, for the capacity study.

⁽c) In 2006, TP began being measured at HS10 as the weighted averages of D002 and D003.

⁽d) WP2 was offline from January 2009 through June 2009, due to the renovation project.

⁽e) Southern flow train was offline from May 2013 through December 2013, for the pulsing study.

⁽f) Beginning in 2014, TP results for Stratum 1 through 4 compiled by averaging TP each month prior to finding the annual TP.

⁽g) Southern Flow Train was offline from November 2015 through November 2016, due to the demucking project.

⁽h) Cell 11 was offline in 2020, due to a biogeochemistry study. Mean TN was from WL12X and WL12Y.

Table 4-10 Summary of Total Phosphorus Concentration Profile Through the

Central Flow Train (mg/L)

	Station ^(a)						
Year	Influent WP1	Stratum 1	Stratum 2	Stratum 3	Stratum 4	Stratum 5	Final Outfall HS10
2002 2003 2004 2005 2006 ^(b) 2007 2008 2009 ^(c) 2010 2011 2012 2013 ^(d) 2014 ^(e) 2015	0.235 0.207 0.240 0.401 0.333 0.276 0.210 0.153 0.134 0.159 0.194 0.284 0.464 0.247	0.198 0.154 0.184 0.326 0.346 0.254 0.045 0.048 0.073 0.081 0.114 0.201 0.395 0.291	0.172 0.142 0.170 0.295 0.284 0.215 0.179 0.043 0.055 0.081 0.097 0.152 0.377 0.317	0.169 0.105 0.140 0.257 0.214 0.205 0.109 0.045 0.056 0.067 0.112 0.196 0.340 0.213	0.129 0.090 0.130 0.208 0.226 0.163 0.120 0.056 0.050 0.058 0.056 0.167 0.265 0.230	0.078 0.076 0.040 0.064 0.219 0.172 0.275 0.056 0.037 0.033 0.035 0.056 0.102 0.070	0.075 0.070 0.060 0.088 0.129 0.066 0.062 0.041 0.041 0.036 0.036 0.037 0.079
2016 2017 2018 ^(f) 2019 2020	0.295 0.146 0.154 0.311 0.208	0.265 0.155 0.110 0.282 0.148	0.267 0.189 0.098 0.253 0.132	0.220 0.168 0.086 0.208 0.119	0.199 0.124 ND 0.076 0.138	0.048 0.065 0.043 0.038 0.035	0.051 0.068 0.049 0.053 0.050
Average	0.245	0.193	0.185	0.159	0.138	0.081	0.061

⁽a) Averages for Stations WP1 and HS10 are from data presented in Appendix B. Other stations are from data presented in Appendix A.

⁽b) In 2006, total phosphorus concentrations began being measured at HS10 as the weighted averages between D002 and D003.

⁽c) TP results do not include data collected for the drawdown experiment.

⁽d) TP results do not include data from May 2013 through December 2013, which was collected for the pulsing study.

⁽e) Beginning in 2014, TP results for Stratum 1 through 5 compiled by averaging TP each month prior to finding the annual TP.

⁽f) Stratum 4 (Cell 14) was offline from April 2018 through January 2019 due to the demucking project.

Table 4-11 Comparison of 2020 Average Monthly Dissolved Oxygen (DO) Concentrations in

OEW Effluents and FDEP Annual Permit Limit (mg/L)^(a)

Month	D002	D003	FDEP Annual Average Permit Limit
January	6.1	ND	5.0
February	6.0	ND	5.0
March	6.8	ND	5.0
April	5.3	ND	5.0
May	5.2	ND	5.0
June	4.6	ND	5.0
July	4.4	ND	5.0
August	4.3	ND	5.0
September	4.3	ND	5.0
October	4.7	ND	$5.0, 3.8^{(a)}$
November	4.9	ND	3.8
December	6.0	ND	3.8
Average	5.2		

Table 4-12 2020 Monthly Rainfall at OEW (a)

Month	Rainfall (inches)
January	0.51
February	2.58
March	0.18
April	3.26
May	6.80
June	6.56
July	9.25
August	7.13
September	11.16
October	2.97
November	4.46
December	0.61
Total Annual	55.48

Data compiled by St. Johns River Water Management District's WSR-88D NexRad Radar. Average using pixel ids 114624, 114625 and 114150.

ND – No Discharge.

(a) On October 22, 2020, FDEP annual average DO minimum permit limit changed from 5.0 mg/L to 3.8 mg/L.

Table 4-13 OEW Historical Flow and Rainfall Data

Year	Influent Flow (MGD)	Discharge Flow (MGD)	Rainfall (in/yr)	Rainfall ^(a) (MGD)	Evapotranspiration/ Percolation ^(b) (MGD)
1988	9.98	10.63	N/A	N/A	N/A
1989	13.33	13.91	45.41	4.02	3.44
1990	13.28	10.68	36.00	3.19	5.79
1991	12.90	13.40	67.00	5.93	5.43
1992	12.77	11.60	59.00	5.22	6.39
1993	12.63	10.00	36.61	3.24	5.87
1994	12.42	12.52	80.62	7.14	7.04
1995	15.12	8.83 ^(c)	44.52	3.94	10.23
1996	15.68	16.34	64.55	5.71	5.05
1997	15.22	16.67	71.42	6.32	4.87
1998	14.22	13.96	45.21	4.00	4.26
1999	17.20	19.43	36.63	3.24	1.04
2000	17.45	13.69	37.65	3.33	7.09
2001	17.86	16.76	54.75	4.85	5.95
2002	16.59	22.51	59.57	5.27	-0.65
2003	17.36	24.87	41.10	3.64	-3.87
2004	17.20	26.80	60.58	5.36	-4.24
2005	18.27	25.25	59.90	5.30	-1.68
2006	12.68	17.63	38.05	3.37	-1.58
2007	12.33	14.62	34.90	3.09	0.80
2008	12.17	15.06	48.68	4.31	1.42
2009	14.14	15.39	43.49	3.62	8.51
2010	15.29	18.96	44.49 ^(d)	3.94	0.27
2011	15.17	17.18	57.00	5.05	3.04
2012	14.33	18.11	48.54	4.30	0.52
2013	14.16	19.18	41.99	3.72	-1.30
2014	14.32	18.55	62.97	5.57	1.34
2015	11.80	16.57	49.00	4.34	-0.43
2016	12.95	16.16	52.21	4.62	1.41
2017 ^(e)	15.30	23.94	51.24	4.54	-4.10
2018	15.75	26.02	63.56	5.63	-4.64
2019	16.40	21.84	60.24	5.33	-0.11
2020	15.65	21.40	55.48	4.91	-0.84
Average	14.60	17.23	51.64	4.56	1.88

⁽a) Rainfall data conversion is based on even distribution over OEW's 1,190-acres.

⁽b) Evaporation/Percolation estimated based upon influent minus effluent flow plus rainfall.

⁽c) The effluent flow meter was nonfunctional during part of the year.

⁽d) Locations with closer proximity to OEW began being used for average rainfall information.

⁽e) Data compiled by St. Johns River Water Management District's WSR-88D NexRad Radar rainfall data (in/year).



Figure 4-1 Orlando Easterly Wetlands – Sampling Stations

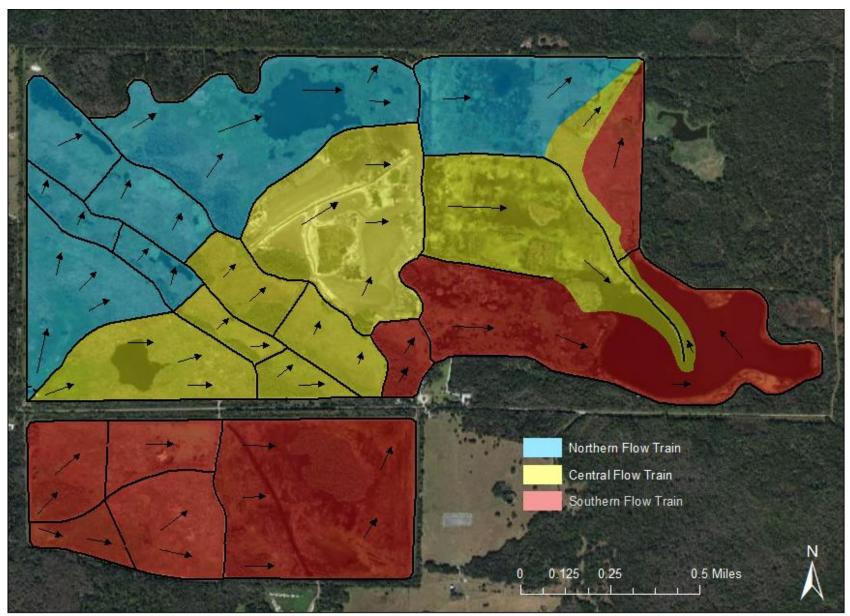


Figure 4-1 Orlando Easterly Wetlands – Flow Train Schematic

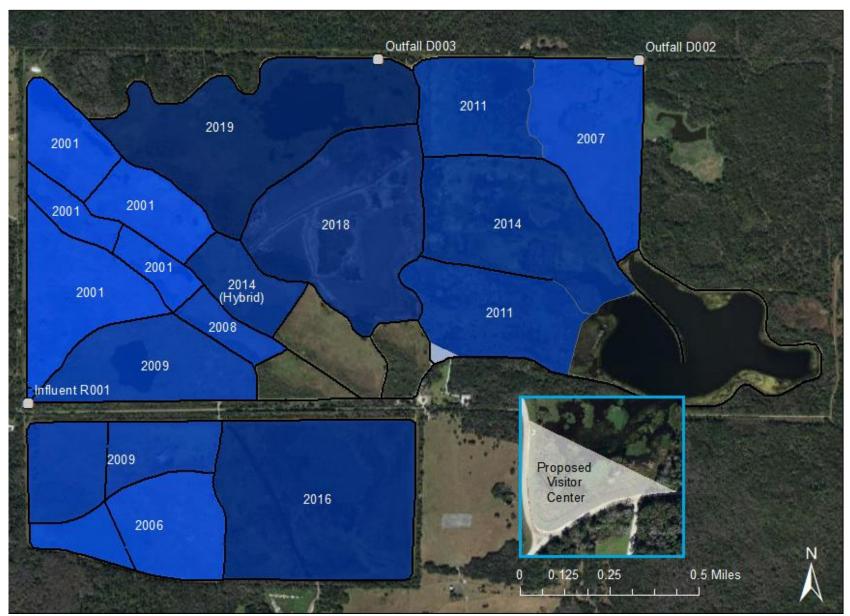


Figure 4-3 Orlando Easterly Wetlands – Demucked Areas and Proposed Visitor Center

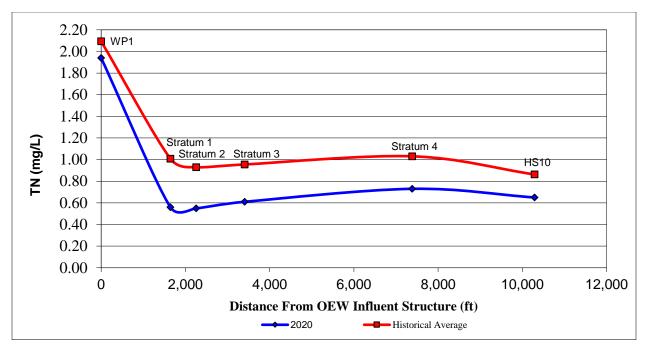


Figure 4-4 Total Nitrogen Profile Through the Northern Flow Train

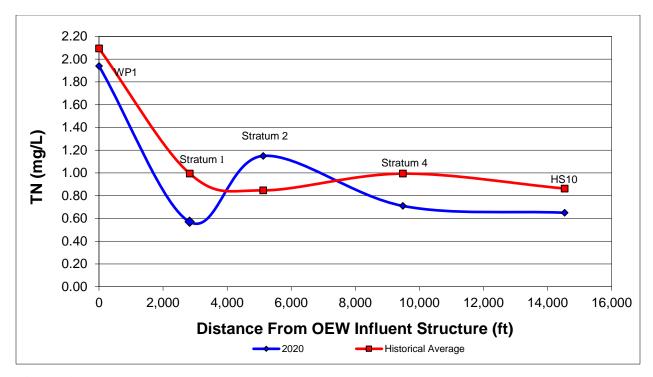


Figure 4-5 Total Nitrogen Profile Through the Southern Flow Train^(a)

⁽a) Stratum 3 is not historically depicted.

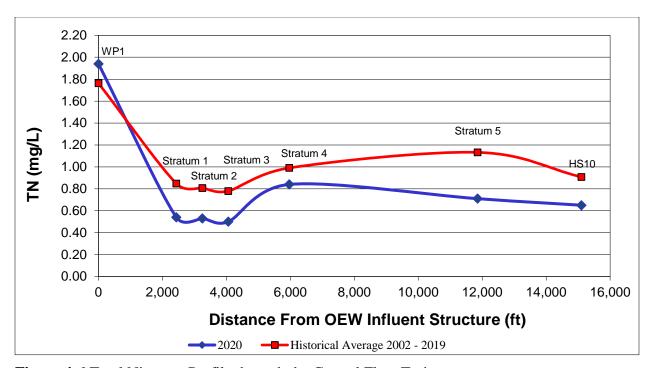


Figure 4-6 Total Nitrogen Profile through the Central Flow Train

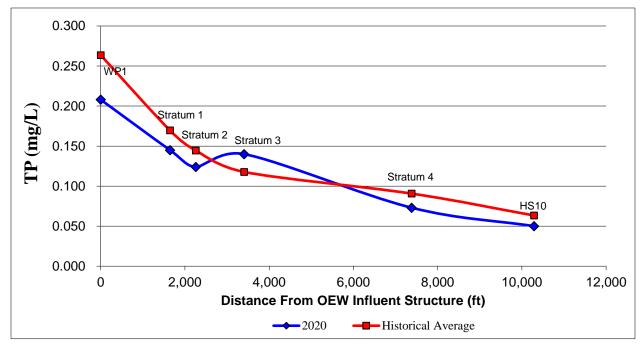


Figure 4-7 Total Phosphorus Profile Through the Northern Flow Train

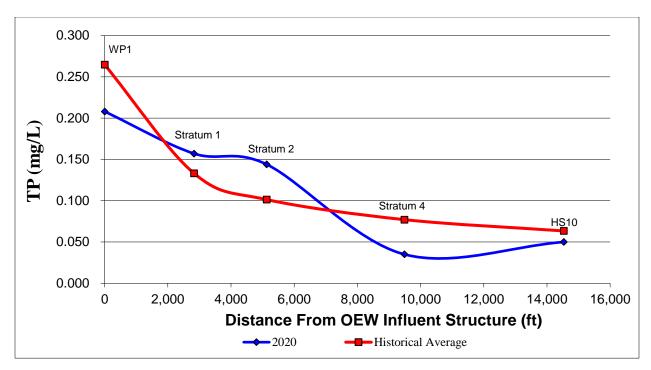


Figure 4-8 Total Phosphorus Profile Through the Southern Flow Train^(a)

(a) Stratum 3 is not historically depicted.

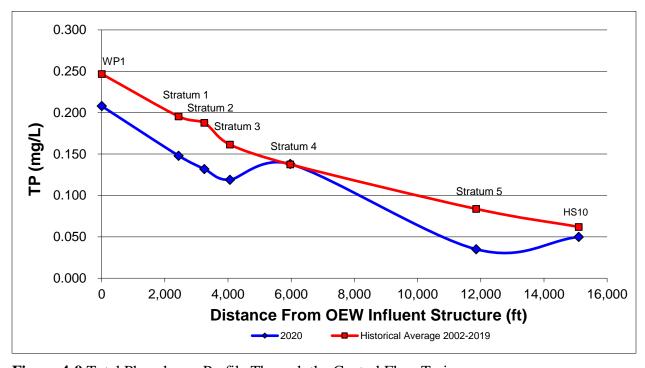


Figure 4-9 Total Phosphorus Profile Through the Central Flow Train

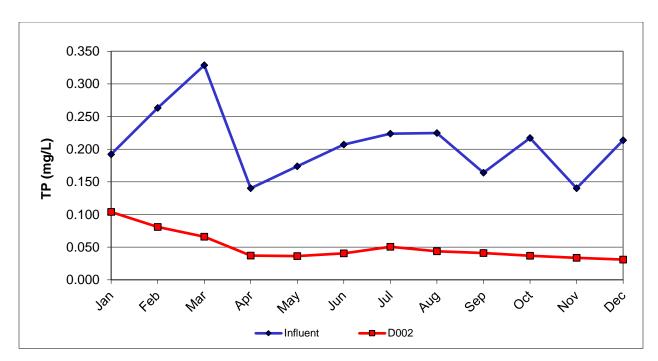


Figure 4-10 2020 Average Monthly Total Phosphorus Concentration Entering and Exiting the Orlando Easterly Wetlands

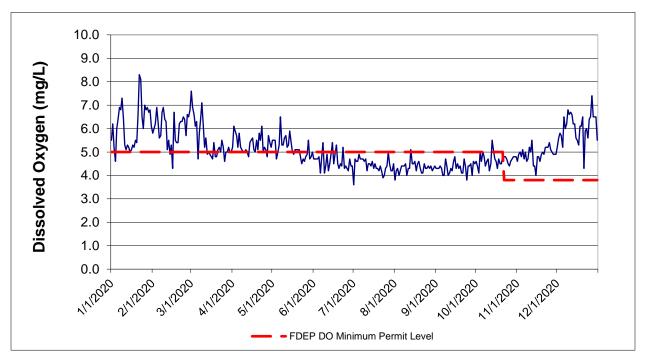


Figure 4-11 Dissolved Oxygen Profile at the OEW Final Discharge D002(a)

⁽a) On October 22, 2020, FDEP DO Minimum Permit Level decreased from 5.0 mg/L to 3.8 mg/L

Conclusion

The 2020 Orlando Easterly Wetlands Annual Report summarizes the parameters of concern as outlined in the FDEP Domestic Wastewater Facility Permit (FL0037966) issued on June 18, 2015 as well as the new edition that occurred on October 22, 2020. The OEW is one of the permitted discharge locations for the Iron Bridge Regional WRF. In 2020, the OEW discharge continued to satisfy all monthly permit conditions as outlined by the FDEP operating permit.

The OEW continues to demonstrate its ability to polish nutrient loadings from reclaimed water prior to discharge to the river system. The OEW continues to provide nutrient removal, diverse habitats and facilitate educational recreation opportunities thus providing a multifaceted beneficial reuse project.

Appendix A 2020 USGS Little Econlockhatchee and St. Johns River Gage Height and Discharge Data

Index:

ND: Not Documented

A:e USGS Approved and Estimated

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
1/1/2020	5.69	1350	873
1/2/2020	5.71	1340	866
1/3/2020	5.71	1290	834
1/4/2020	5.71	1270	821
1/5/2020	5.71	1370	885
1/6/2020	5.72	1350	873
1/7/2020	5.68	1310	847
1/8/2020	5.63	1280	827
1/9/2020	5.62	1280	827
1/10/2020	5.60	1230	795
1/11/2020	5.60	1220	789
1/12/2020	5.55	1210	782
1/13/2020 A:e	ND	1200	776
1/14/2020	5.50	1190	769
1/15/2020	5.46	1160	750
1/16/2020	5.40	1150	743
1/17/2020	5.34	1100	711
1/18/2020	5.27	1080	698
1/19/2020	5.18	1010	653
1/20/2020	5.06	973	629
1/21/2020	4.92	907	586
1/22/2020	4.79	863	558
1/23/2020	4.76	848	548
1/24/2020	4.70	804	520
1/25/2020	4.62	808	522
1/26/2020	4.55	788	509
1/27/2020	4.48	759	491
1/28/2020	4.39	733	474
1/29/2020	4.31	702	454
1/30/2020	4.20	673	435
1/31/2020	4.12	648	419
2/1/2020	4.03	627	405
2/2/2020	3.96	607	392
2/3/2020	3.89	569	368
2/4/2020	3.81	545	352
2/5/2020	3.76	533	344
2/6/2020	3.72	506	327
2/7/2020	3.73	554	358
2/8/2020	3.72	538	348
2/9/2020	3.63	501	324
2/10/2020	3.57	491	317
2/11/2020	3.52	476	308
2/12/2020	3.49	481	311
2/13/2020	3.44	459	297
2/14/2020	3.39	478	309

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
2/15/2020	3.34	438	283
2/16/2020	3.29	432	279
2/17/2020	3.53	521	337
2/18/2020	3.64	526	340
2/19/2020	3.60	522	337
2/20/2020	3.54	502	324
2/21/2020	3.41	464	300
2/22/2020	3.31	434	281
2/23/2020	3.20	402	260
2/24/2020	3.17	401	259
2/25/2020	3.15	399	258
2/26/2020	3.16	410	265
2/27/2020	3.15	411	266
2/28/2020	3.06	387	250
2/29/2020	2.96	370	239
3/1/2020	2.89	338	218
3/2/2020	2.84	328	212
3/3/2020	2.80	333	215
3/4/2020	2.77	327	211
3/5/2020	2.71	305	197
3/6/2020	2.64	317	205
3/7/2020	2.54	277	179
3/8/2020	2.42	240	155
3/9/2020	2.37	234	151
3/10/2020	2.38	247	160
3/11/2020	2.37	251	162
3/12/2020	2.33	245	158
3/13/2020	2.27	233	151
3/14/2020	2.22	227	147
3/15/2020	2.17	231	149
3/16/2020	2.12	197	127
3/17/2020	2.06	196	127
3/18/2020	2.02	175	113
3/19/2020	1.99	176	114
3/20/2020	1.96	172	111
3/21/2020	1.93	189	122
3/22/2020	1.88	164	106
3/23/2020	1.82	160	103
3/24/2020	1.77	164	106
3/25/2020	1.71	145	94
3/26/2020	1.66	137	89
3/27/2020	1.60	132	85
3/28/2020	1.60	131	85
3/29/2020	1.58	135	87
3/30/2020	1.55	135	87
3/31/2020	1.49	123	79
4/1/2020	1.44	125	81
4/2/2020	1.36	101	65
4/3/2020	1.32	109	70
4/4/2020	1.32	97	63

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
4/5/2020	1.39	103	67
4/6/2020	1.50	121	78
4/7/2020	1.47	113	73
4/8/2020	1.43	135	87
4/9/2020	1.38	98	63
4/10/2020	1.30	90	58
4/11/2020	1.24	86	56
4/12/2020	1.27	93	60
4/13/2020	1.33	126	81
4/14/2020	1.37	121	78
4/15/2020	1.27	99	64
4/16/2020	1.23	80	52
4/17/2020	1.18	81	52
4/18/2020	1.22	90	58
4/19/2020	1.27	110	71
4/20/2020	1.24	101	65
4/21/2020	1.23	98	63
4/22/2020	1.19	81	52
4/23/2020	1.17	96	62
4/24/2020	1.26	96	62
4/25/2020	1.42	121	78
4/26/2020	1.44	140	90
4/27/2020	1.45	126	81
4/28/2020	1.42	116	75
4/29/2020	1.44	119	77
4/30/2020	1.53	129	83
5/1/2020	1.56	141	91
5/2/2020	1.48	118	76
5/3/2020	1.45	113	73
5/4/2020	1.45	138	89
5/5/2020	1.44	149	96
5/6/2020	1.40	116	75
5/7/2020	1.34	97	63
5/8/2020	1.26	100	65
5/9/2020	1.25	95	61
5/10/2020	1.26	94	60
5/11/2020	1.25	99	64
5/12/2020	1.22	91	59
5/13/2020	1.19	83	53
5/14/2020	1.22	80	52
5/15/2020	1.28	98	63
5/16/2020	1.33	100	65
5/17/2020	1.27	111	72
5/18/2020	1.17	88	57
5/19/2020	1.13	106	69
5/20/2020	1.11	111	72
5/21/2020	1.09	104	67
5/22/2020	1.14	81	52
5/23/2020	1.16	93	60
5/24/2020	1.17	79	51
10			

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
5/25/2020	1.29	89	57
5/26/2020	1.53	149	96
5/27/2020	1.57	129	83
5/28/2020	1.63	144	93
5/29/2020	1.84	171	111
5/30/2020	2.04	208	134
5/31/2020	2.18	242	156
6/1/2020	2.28	234	151
6/2/2020	2.32	244	158
6/3/2020	2.36	255	165
6/4/2020	2.54	301	195
6/5/2020	2.87	376	243
6/6/2020	3.41	511	330
6/7/2020	4.00	594	384
6/8/2020	4.19	634	410
6/9/2020	4.27	653	422
6/10/2020	4.35	671	434
6/11/2020	4.49	718	464
6/12/2020	4.55	726	469
6/13/2020	4.61	755	488
6/14/2020	4.74	795	514
6/15/2020	4.85	837	541
6/16/2020	4.92	870	562
6/17/2020	5.04	889	575
6/18/2020	5.29	990	640
6/19/2020	5.30	1000	646
6/20/2020	5.29	1000	646
6/21/2020	5.30	1000	646
6/22/2020	5.30	1010	653
6/23/2020	5.31	1020	659
6/24/2020	5.32	1020	659
6/25/2020	5.31	1030	666
6/26/2020	5.30	1030	666
6/27/2020	5.29	1010	653
6/28/2020	5.27	1000	646
6/29/2020	5.23	1010	653
6/30/2020	5.20	987	638
7/1/2020	5.17	966	624
7/1/2020	5.17	946	611
7/3/2020	5.13	953	616
7/4/2020	5.17	950	614
7/4/2020	5.30	980	633
7/6/2020	5.35	1000	646
7/6/2020	5.48	1110	717
7/7/2020	5.48 5.57		
7/8/2020	5.64	1180	763
7/9/2020	5.64	1220	789
		1260	814
7/11/2020	5.89	1350	873
7/12/2020	5.98	1400	905
7/13/2020	6.01	1440	931

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
7/14/2020	6.04	1470	950
7/15/2020	6.04	1470	950
7/16/2020	6.03	1440	931
7/17/2020	6.02	1430	924
7/18/2020	6.02	1420	918
7/19/2020	6.00	1400	905
7/20/2020	5.97	1360	879
7/21/2020	5.92	1330	860
7/22/2020	5.86	1320	853
7/23/2020	5.83	1270	821
7/24/2020	5.80	1250	808
7/25/2020	5.75	1230	795
7/26/2020	5.71	1190	769
7/27/2020	5.70	1190	769
7/28/2020	5.87	1300	840
7/29/2020	5.92	1280	827
7/30/2020	5.97	1290	834
7/31/2020	5.99	1330	860
8/1/2020	6.00	1340	866
8/2/2020	5.98	1360	879
8/3/2020	5.95	1340	866
8/4/2020	5.99	1390	898
8/5/2020	6.17	1580	1021
8/6/2020	6.28	1560	1008
8/7/2020	6.40	1550	1002
8/8/2020	6.48	1640	1060
8/9/2020	6.50	1660	1073
8/10/2020	6.52	1690	1092
8/11/2020	6.50	1710	1105
8/12/2020	6.50	1700	1099
8/13/2020	6.51	1660	1073
8/14/2020	6.52	1690	1092
8/15/2020	6.52	1680	1086
8/16/2020	6.50	1690	1092
8/17/2020	6.50	1690	1092
8/18/2020 e	ND	1680	1086
8/19/2020 e	ND	1570	1015
8/20/2020	6.50	1650	1066
8/21/2020	6.49	1640	1060
8/22/2020	6.49	1670	1079
8/23/2020	6.51	1680	1086
8/24/2020	6.54	1770	1144
8/25/2020	6.54	1770	1144
8/26/2020	6.54	1780	1150
8/27/2020	6.55	1790	1157
8/28/2020	6.53	1740	1125
8/29/2020 e	ND	1750	1131
8/30/2020 e	ND	1640	1060
8/31/2020 e	ND	1740	1125
9/1/2020 e	ND	1730	1118

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
9/2/2020 e	ND	1770	1144
9/3/2020	6.62	1760	1138
9/4/2020	6.59	1740	1125
9/5/2020	6.58	1720	1112
9/6/2020	6.55	1720	1112
9/7/2020	6.55	1740	1125
9/8/2020	6.53	1700	1099
9/9/2020	6.50	1670	1079
9/10/2020	6.47	1650	1066
9/11/2020	6.45	1640	1060
9/12/2020	6.46	1710	1105
9/13/2020	6.50	1710	1105
9/14/2020	6.49	1670	1079
9/15/2020	6.47	1680	1086
9/16/2020	6.48	1630	1054
9/17/2020 e	ND	1580	1021
9/18/2020	6.46	1610	1041
9/19/2020	6.47	1630	1054
9/20/2020	6.87	2000	1293
9/21/2020	7.12	2290	1480
9/22/2020	7.28	2580	1668
9/23/2020	7.35	2620	1693
9/24/2020	7.36	2520	1629
9/25/2020	7.32	2360	1525
9/26/2020	7.28	2280	1474
9/27/2020	7.26	2210	1474
9/28/2020	7.34	2260	1461
9/29/2020	7.48	2450	1583
9/30/2020	7.46		
10/1/2020	7.80	2870 3150	1855 2036
10/1/2020	7.85		2036
		3120	
10/3/2020	7.84	3110	2010
10/4/2020	7.83	3000	1939
10/5/2020	7.82	2960	1913
10/6/2020	7.80	2870	1855
10/7/2020	7.75	2790	1803
10/8/2020	7.70	2690	1739
10/9/2020	7.66	2730	1764
10/10/2020	7.62	2640	1706
10/11/2020	7.57	2570	1661
10/12/2020	7.54	2580	1668
10/13/2020	7.51	2540	1642
10/14/2020	7.47	2550	1648
10/15/2020	7.43	2530	1635
10/16/2020	7.38	2440	1577
10/17/2020	7.33	2430	1571
10/18/2020	7.33	2460	1590
10/19/2020	7.34	2420	1564
10/20/2020	7.33	2370	1532
10/21/2020	7.30	2400	1551

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
10/22/2020	7.26	2360	1525
10/23/2020	7.23	2400	1551
10/24/2020	7.20	2340	1512
10/25/2020	7.16	2300	1487
10/26/2020	7.14	2290	1480
10/27/2020	7.12	2290	1480
10/28/2020	7.08	2230	1441
10/29/2020	7.02	2120	1370
10/30/2020	6.96	2150	1390
10/31/2020	6.93	2120	1370
11/1/2020	6.89	2070	1338
11/2/2020	6.85	2010	1299
11/3/2020	6.83	2050	1325
11/4/2020	6.79	1980	1280
11/5/2020	6.74	1930	1247
11/6/2020	6.69	1890	1222
11/7/2020	6.65	1870	1209
11/8/2020	6.62	1840	1189
11/9/2020	6.65	1850	1196
11/10/2020	6.75	1940	1254
11/11/2020	6.86	2060	1331
11/11/2020	6.87	1970	1273
11/13/2020	6.91	2180	1409
11/14/2020	6.93	2220	1435
11/15/2020	6.95	2190	1435
11/16/2020	6.94	2160	1396
11/17/2020	6.91	2190	1415
11/18/2020	6.89	2180	1409
11/19/2020	6.88		1396
11/20/2020	6.85	2160 2100	1357
11/21/2020	6.85	2100	1383
		-	
11/22/2020 11/23/2020	6.89 6.90	2200	1422
11/23/2020		2210	1428
	6.93	2310	1493
11/25/2020	6.96	2280	1474
11/26/2020	6.96	2300	1487
11/27/2020	6.98	2330	1506
11/28/2020	6.99	2380	1538
11/29/2020	7.01	2390	1545
11/30/2020	7.01	2380	1538
12/1/2020	6.97	2440	1577
12/2/2020	7.01	2520	1629
12/3/2020	7.03	2500	1616
12/4/2020	7.03	2430	1571
12/5/2020	7.02	2460	1590
12/6/2020	7.02	2480	1603
12/7/2020	7.01	2440	1577
12/8/2020	7.00	2500	1616
12/9/2020	7.00	2480	1603
12/10/2020	7.00	2430	1571

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Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
12/11/2020	6.98	2430	1571
12/12/2020	6.97	2380	1538
12/13/2020	6.96	2340	1512
12/14/2020	6.94	ND	ND
12/15/2020	6.92	2290	1480
12/16/2020	6.90	2270	1467
12/17/2020	6.85	2240	1448
12/18/2020	6.80	2240	1448
12/19/2020	6.79	2200	1422
12/20/2020	6.75	2100	1357
12/21/2020	6.73	2070	1338
12/22/2020	6.69	2100	1357
12/23/2020	6.66	2040	1318
12/24/2020	6.62	1890	1222
12/25/2020	6.51	1900	1228
12/26/2020	6.51	1960	1267
12/27/2020	6.48	1890	1222
12/28/2020	6.43	1820	1176
12/29/2020	6.39	1780	1150
12/30/2020	6.36	1720	1112
12/31/2020	6.33	1690	1092

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Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
1/1/2020	3.72	1410	911
1/2/2020	3.74	1430	924
1/3/2020	3.74	1410	911
1/4/2020	3.77	1370	885
1/5/2020	3.78	1390	898
1/6/2020	3.78	1430	924
1/7/2020	3.77	1400	905
1/8/2020	3.74	1370	885
1/9/2020	3.70	1420	918
1/10/2020	3.64	1400	905
1/11/2020	3.59	1370	885
1/12/2020	3.54	1300	840
1/13/2020	3.49	1280	827
1/14/2020	3.44	1240	801
1/15/2020	3.39	1240	801
1/16/2020	3.33	1220	789
1/17/2020	3.25	1230	795
1/18/2020	3.18	1250	808
1/19/2020	3.14	1150	743
1/20/2020	3.07	1100	711
1/21/2020	3.00	1070	692
1/22/2020	2.95	1090	704
1/23/2020	2.92	1120	724
1/24/2020	2.90	1050	679
1/25/2020	2.86	982	635
1/26/2020	2.82	984	636
1/27/2020	2.79	960	620
1/28/2020	2.76	937	606
1/29/2020	2.71	946	611
1/30/2020	2.65	886	573
1/31/2020	2.59	908	587
2/1/2020	2.55	857	554
2/2/2020	2.53	850	549
2/3/2020	2.49	859	555
2/4/2020	2.44	835	540
2/5/2020	2.38	848	548
2/6/2020	2.30	844	545
2/7/2020	2.35	737	476
2/8/2020	2.27	830	536
2/9/2020	2.16	849	549
2/10/2020	2.09	832	538
2/11/2020	2.01	791	511
2/12/2020	1.93	798	516
2/13/2020	1.87	749	484
2/14/2020	1.83	732	473

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
2/15/2020	1.78	741	479
2/16/2020	1.69	704	455
2/17/2020	1.74	697	450
2/18/2020	1.74	703	454
2/19/2020	1.74	690	446
2/20/2020	1.78	685	443
2/21/2020	1.83	668	432
2/22/2020	1.88	735	475
2/23/2020	1.95	730	472
2/24/2020	1.98	690	446
2/25/2020	1.99	630	407
2/26/2020	2.03	611	395
2/27/2020	2.13	580	375
2/28/2020	2.13	655	423
2/29/2020	2.12	693	448
3/1/2020	2.05	717	463
3/2/2020	1.96	684	442
3/3/2020	1.88	607	392
3/4/2020	1.83	604	390
3/5/2020	1.75	581	376
3/6/2020	1.68	513	332
3/7/2020	1.61	552	357
3/8/2020	1.53	585	378
3/9/2020	1.45	526	340
3/10/2020	1.38	469	303
3/11/2020	1.33	422	273
3/12/2020	1.30	412	266
3/13/2020	1.27	387	250
3/14/2020	1.22	379	245
3/15/2020	1.16	364	235
3/16/2020	1.10	362	234
3/17/2020	1.05	335	217
3/18/2020	1.03	310	200
3/19/2020	1.00	313	202
3/20/2020	0.95	299	193
3/21/2020	0.93	277	179
3/22/2020	0.89	275	178
3/23/2020	0.84	293	189
3/24/2020	0.82	272	176
3/25/2020	0.84	240	155
3/26/2020	0.86	263	170
3/27/2020	0.80	257	166
3/28/2020	0.78	237	153
3/29/2020	0.78	201	130
3/30/2020	0.79	223	144
3/31/2020	0.82	180	116
4/1/2020	0.94	249	161
4/2/2020	0.89	241	156
4/3/2020	0.90	217	140
4/4/2020	0.95	193	125

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
4/5/2020	1.02	211	136
4/6/2020	1.07	240	155
4/7/2020	1.13	211	136
4/8/2020	1.21	214	138
4/9/2020	1.31	220	142
4/10/2020	1.32	285	184
4/11/2020	1.27	280	181
4/12/2020	1.15	317	205
4/13/2020	1.09	140	90
4/14/2020	1.06	230	149
4/15/2020	1.00	221	143
4/16/2020	0.99	252	163
4/17/2020	0.98	225	145
4/18/2020	1.08	166	107
4/19/2020	1.15	199	129
4/20/2020	1.16	212	137
4/21/2020	1.13	262	169
4/22/2020	1.06	259	167
4/23/2020	0.95	259	162
4/24/2020	0.96	199	129
4/25/2020	0.95	219	142
4/26/2020	0.92	202	131
4/27/2020	0.92	257	166
4/28/2020	0.86	244	158
4/29/2020	0.75	262	169
4/30/2020	0.73	189	122
5/1/2020	0.73	239	154
5/2/2020	0.73	220	142
5/3/2020	0.60	198	128
5/4/2020	0.55	213	138
5/5/2020	0.54	182	118
5/6/2020	0.57	174	112
5/7/2020	0.61	216	140
5/8/2020	0.58	182	118
5/9/2020	0.62	188	122
5/10/2020	0.61	194	125
5/11/2020	0.67	177	114
5/11/2020	0.67	195	126
5/13/2020	0.72	207	134
5/14/2020	0.67	203	131
5/15/2020	0.64	191	123
5/16/2020	0.04	210	136
5/17/2020	0.72	202	131
5/17/2020	0.86	180	116
5/19/2020	0.88	163	105
5/20/2020	0.87	175	113
5/21/2020	0.86	196	127
5/22/2020	0.00	218	141
5/23/2020	0.85	205	132
5/24/2020	0.80	205	
5/25/2020	0.80	213	138
		252	148
5/26/2020	0.89	252	163

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
5/27/2020	0.97	277	179
5/28/2020	1.10	256	165
5/29/2020	1.34	365	236
5/30/2020	1.50	529	342
5/31/2020	1.60	576	372
6/1/2020	1.73	669	432
6/2/2020	1.77	785	507
6/3/2020	1.75	788	509
6/4/2020	1.77	740	478
6/5/2020	1.84	725	469
6/6/2020	1.94	856	553
6/7/2020	2.21	1080	698
6/8/2020	2.52	1180	763
6/9/2020	2.72	1320	853
6/10/2020	2.84	1400	905
6/11/2020	2.95	1480	957
6/12/2020	2.99	1470	950
6/13/2020	3.01	1460	944
6/14/2020	3.01	1430	924
6/15/2020	3.02	1400	905
6/16/2020	2.99	1420	918
6/17/2020	2.98	1470	950
6/18/2020	2.98	1490	963
6/19/2020	2.97	1470	950
6/20/2020	2.99	1460	944
6/21/2020	2.97	1450	937
6/22/2020	2.94	1450	937
6/23/2020	2.93	1450	937
6/24/2020	2.92	1480	957
6/25/2020	2.94	1550	1002
6/26/2020	2.95	1590	1028
6/27/2020	2.92	1580	1028
6/28/2020	2.85	1530	989
6/29/2020	2.79	1480	957
6/30/2020	2.74	1450	937
7/1/2020	2.74	1450	937
7/1/2020	2.68	1450	937
7/3/2020	2.66	1480	957 957
7/4/2020	2.69	1540	995
7/5/2020	2.69	1580	1021
7/6/2020	2.73	1640	1060
7/7/2020	ND	1730	1118
7/8/2020	ND ND	1810	1118
7/8/2020	ND ND	1900	
7/9/2020	ND ND	1830	1228
7/10/2020	ND ND		1183
		1890	1222
7/12/2020	ND ND	1860	1202
7/13/2020	ND ND	2080	1344
7/14/2020	ND	2110	1364
7/15/2020	3.70	2090	1351
7/16/2020	3.70	2090	1351
7/17/2020	3.70	2130	1377

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
7/18/2020	3.67	2120	1370
7/19/2020	3.63	2110	1364
7/20/2020	3.60	2110	1364
7/21/2020	3.57	2120	1370
7/22/2020	3.54	2110	1364
7/23/2020	3.53	2110	1364
7/24/2020	3.52	2130	1377
7/25/2020	3.49	2130	1377
7/26/2020	3.45	2110	1364
7/27/2020	3.42	2090	1351
7/28/2020	3.45	2090	1351
7/29/2020	3.49	2170	1403
7/30/2020	3.67	2350	1519
7/31/2020	3.82	2450	1583
8/1/2020	3.91	2480	1603
8/2/2020	3.98	2520	1629
8/3/2020	4.03	2520	1622
8/3/2020	4.03	2540	1622
8/5/2020	4.08	2530	1635
8/6/2020	4.10	2530	1635
8/7/2020	4.21	2650	1713
8/8/2020	4.47	2880	1861
8/9/2020	4.56	2910	1881
8/10/2020	4.61	2910	1881
8/11/2020	4.66	2950	1907
8/12/2020	4.72	3000	1939
8/13/2020	4.76	3030	1958
8/14/2020	4.80	3080	1991
8/15/2020	4.88	3160	2042
8/16/2020	4.93	3180	2055
8/17/2020	4.98	3200	2068
8/18/2020	5.05	3270	2113
8/19/2020	5.12	3380	2185
8/20/2020	5.16	3420	2210
8/21/2020	5.18	3370	2178
8/22/2020	5.25	3400	2197
8/23/2020	5.33	3430	2217
8/24/2020	5.33	3420	2210
8/25/2020	5.31	3350	2165
8/26/2020	5.26	3290	2126
8/27/2020	5.20	3240	2094
8/28/2020	5.15	3170	2049
8/29/2020	5.09	3130	2023
8/30/2020	5.06	3090	1997
8/31/2020	5.07	3060	1978
9/1/2020	5.19	3140	2029
9/2/2020	5.32	3340	2159
9/3/2020	5.39	3390	2191
9/4/2020	5.42	3390	2191
9/5/2020	5.46	3410	2204
9/6/2020	5.42	3370	2178
9/7/2020	5.38	3350	2165

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
9/8/2020	5.33	3290	2126
9/9/2020	5.27	3250	2101
9/10/2020	5.23	3230	2088
9/11/2020	5.20	3260	2107
9/12/2020	5.21	3380	2185
9/13/2020	5.28	3360	2172
9/14/2020	5.34	3340	2159
9/15/2020	5.38	3370	2178
9/16/2020	5.43	3440	2223
9/17/2020	5.48	3490	2256
9/18/2020	5.50	3440	2223
9/19/2020	5.52	3420	2210
9/20/2020	5.86	3720	2404
9/21/2020	6.23	3840	2482
9/22/2020	6.49	3980	2572
9/23/2020	6.69	4150	2682
9/24/2020	6.85	4260	2753
9/25/2020	6.93	4230	2734
9/26/2020	6.95	4180	2702
9/27/2020	6.95	4180	2702
9/28/2020	7.05	4210	2721
9/29/2020	7.12	4190	2708
9/30/2020	7.15	4240	2740
10/1/2020	7.20	4390	2837
10/1/2020	7.24	4410	2850
10/3/2020	7.25	4430	2863
10/4/2020	7.27	4450	2876
10/5/2020	7.26	4470	2889
10/6/2020	7.25	4430	2863
10/7/2020	7.21	4380	2831
10/8/2020	7.16	4340	2805
10/9/2020	7.10	4300	2779
10/10/2020	7.11	4280	2766
10/10/2020	7.06	4180	2700
10/11/2020	7.00	4100	2650
10/13/2020	6.95	4070	2631
10/14/2020	6.86	3980	2572
10/15/2020	6.79	4000	2585
10/16/2020	6.71	3930	2540
10/17/2020	6.61	3880	2508
10/17/2020	6.56	3880	2508
10/19/2020	6.55	3940	2547
10/19/2020	6.50	3890	254 <i>7</i> 2514
10/20/2020	6.46	3890	
10/21/2020	6.42	3840	2514
			2482
10/23/2020	6.38	3820	2469
10/24/2020	6.34	3790	2450
10/25/2020	6.28	3750	2424
10/26/2020	6.22	3680	2378
10/27/2020	6.17	3680	2378
10/28/2020	6.10	3650	2359
10/29/2020	6.02	3590	2320

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
10/30/2020	5.95	3470	2243
10/31/2020	5.86	3490	2256
11/1/2020	5.78	3450	2230
11/2/2020	5.71	3310	2139
11/3/2020	5.63	3480	2249
11/4/2020	5.57	3410	2204
11/5/2020	5.51	3360	2172
11/6/2020	5.46	3320	2146
11/7/2020	5.39	3280	2120
11/8/2020	5.33	3240	2094
11/9/2020	5.28	3290	2126
11/10/2020	5.34	3320	2146
11/11/2020	5.39	3420	2210
11/12/2020	5.46	3390	2191
11/13/2020	5.53	3370	2178
11/14/2020	5.60	3490	2256
11/15/2020	5.65	3560	2301
11/16/2020	5.68	3480	2249
11/17/2020	5.67	3460	2236
11/18/2020	5.64	3470	2243
11/19/2020	5.61	3530	2282
11/20/2020	5.58	3450	2230
11/21/2020	5.54	3380	2185
11/22/2020	5.54	3310	2139
11/23/2020	5.56	3240	2094
11/24/2020	5.57	ND	ND
11/25/2020	5.56	3320	2146
11/26/2020	5.54	3260	2107
11/27/2020	5.51	3260	2107
11/28/2020	5.48	3240	2094
11/29/2020	5.46	3260	2107
11/30/2020	5.43	3220	2081
12/1/2020	5.39	3170	2049
12/2/2020	5.35	3240	2094
12/3/2020	5.31	3300	2133
12/4/2020	5.27	3250	2101
12/5/2020	5.22	3210	2075
12/6/2020	5.17	3200	2068
12/7/2020	5.15	3170	2049
12/8/2020	5.11	3170	2049
12/9/2020	5.06	3160	2042
12/10/2020	5.03	3160	2042

USGS 02234000 ST. JOHNS RIVER ABOVE LAKE HARNEY NR GENEVA, FL

Date	Gage Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
12/11/2020	5.00	3140	2029
12/12/2020	4.96	3140	2029
12/13/2020	4.93	3160	2042
12/14/2020	4.90	3110	2010
12/15/2020	4.87	3080	1991
12/16/2020	4.83	3080	1991
12/17/2020	4.80	3000	1939
12/18/2020	4.75	2990	1932
12/19/2020	4.70	3040	1965
12/20/2020	4.66	3010	1945
12/21/2020	4.62	2920	1887
12/22/2020	4.59	2910	1881
12/23/2020	4.55	2890	1868
12/24/2020	4.50	2880	1861
12/25/2020	4.46	2740	1771
12/26/2020	4.41	2820	1823
12/27/2020	4.37	2810	1816
12/28/2020	4.33	2770	1790
12/29/2020	4.26	2760	1784
12/30/2020	4.20	2730	1764
12/31/2020	4.14	2700	1745
Averege	2.50	4000	4046

Average 3.52 1928 1246

ND - Not Documented

Date	Gauge Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
1/1/2020	29.60	123	79
1/2/2020	29.26	110	71
1/3/2020	28.99	99	64
1/4/2020	29.01	100	65
1/5/2020	29.78	131	85
1/6/2020	29.41	116	75
1/7/2020	29.03	101	65
1/8/2020	28.78	92	59
1/9/2020	28.57	84	54
1/10/2020	28.43	79	51
1/11/2020	28.35	76	49
1/12/2020	28.36	77	50
1/13/2020	28.92	97	63
1/14/2020	28.74	90	58
1/15/2020	28.53	83	53
1/16/2020	28.37	77	50
1/17/2020	28.22	72	46
1/18/2020	28.09	68	44
1/19/2020	28.03	66	42
1/20/2020	27.91	62	40
1/21/2020	27.77	57	37
1/22/2020	27.65	53	34
1/23/2020	27.63	53	34
1/24/2020	27.79	58	37
1/25/2020	27.76	57	37
1/26/2020	27.65	53	34
1/27/2020	27.60	52	33
1/28/2020	27.56	50	33
1/29/2020	27.51	49	32
1/30/2020	27.50	49	31
1/31/2020	27.48	48	31
2/1/2020	27.55	50	32
2/2/2020	27.75	56	36
2/3/2020	27.69	55	35
2/4/2020	27.64	53	34
2/5/2020	27.60	52	33
2/6/2020	27.62	52	34
2/7/2020	28.61	87	56
2/8/2020	28.98	99	64
2/9/2020	28.48	81	52
2/10/2020	28.11	68	44
2/11/2020	27.94	63	40
2/12/2020	27.81	58	38
2/13/2020	27.71	55	36
2/14/2020	27.58	51	33

Date	Gauge Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
2/15/2020	27.53	50	32
2/16/2020	27.48	48	31
2/17/2020	27.61	52	34
2/18/2020	27.62	52	34
2/19/2020	27.50	49	31
2/20/2020	27.46	47	31
2/21/2020	27.43	47	30
2/22/2020	27.46	48	31
2/23/2020	27.38	45	29
2/24/2020	27.30	43	28
2/25/2020	27.25	42	27
2/26/2020	27.35	46	30
2/27/2020	27.71	60	39
2/28/2020	27.75	62	40
2/29/2020	27.52	55	35
3/1/2020	27.40	51	33
3/2/2020	27.34	49	32
3/3/2020	27.29	48	31
3/4/2020	27.21	45	29
3/5/2020	27.19	45	29
3/6/2020	27.17	44	28
3/7/2020	27.12	43	27
3/8/2020	27.10	42	27
3/9/2020	27.06	41	26
3/10/2020	27.04	40	26
3/11/2020	27.04	40	26
3/12/2020	27.01	39	25
3/13/2020	26.98	38	25
3/14/2020	26.94	37	24
3/15/2020	26.89	36	23
3/16/2020	26.87	35	23
3/17/2020	26.86	35	23
3/18/2020	26.83	34	22
3/19/2020	26.91	36	23
3/20/2020	26.87	35	23
3/21/2020	26.81	34	22
3/22/2020	26.75	32	21
3/23/2020	26.75	32	21
3/24/2020	26.71	31	20
3/25/2020	26.67	30	19
3/26/2020	26.64	29	19
3/27/2020	26.64	29	19
3/28/2020	26.61	29	18
3/29/2020	26.61	28	18
3/30/2020	26.57	28	18
3/31/2020	26.58	28	18
4/1/2020	26.54	27	17
4/2/2020	26.55	27	17
4/3/2020	26.57	28	18
4/4/2020	26.51	26	17
4/4/2020	20.01	∠∪	17

Date	Gauge Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
4/5/2020	26.71	31	20
4/6/2020	28.13	75	48
4/7/2020	27.28	47	31
4/8/2020	26.94	37	24
4/9/2020	26.71	31	20
4/10/2020	26.62	29	19
4/11/2020	26.58	28	18
4/12/2020	26.55	27	17
4/13/2020	26.57	27	18
4/14/2020	26.53	27	17
4/15/2020	26.52	26	17
4/16/2020	26.63	29	19
4/17/2020	26.79	33	21
4/18/2020	26.81	34	22
4/19/2020	27.28	47	30
4/20/2020	27.00	39	25
4/21/2020	26.77	33	21
4/22/2020	26.65	30	19
4/23/2020	26.57	27	18
4/24/2020	26.72	32	20
4/25/2020	27.08	41	27
4/26/2020	26.91	37	24
4/27/2020	26.72	31	20
4/28/2020	26.61	29	18
4/29/2020	26.51	26	17
4/30/2020	26.71	31	20
5/1/2020	26.80	33	22
5/2/2020	26.66	30	19
5/3/2020	26.65	30	19
5/4/2020	26.54	27	17
5/5/2020	26.47	25	16
5/6/2020	26.51	26	17
5/7/2020	26.45	25	16
5/8/2020	26.39	23	15
5/9/2020	26.37	22	14
5/10/2020	26.39	23	15
5/11/2020	26.38	23	15
5/12/2020	26.31	21	14
5/13/2020	26.38	23	15
5/14/2020	26.35	22	14
5/15/2020	26.35	22	14
5/16/2020	26.52	26	17
5/17/2020	26.63	29	19
5/18/2020	26.52	26	17
5/19/2020	26.45	25	16
5/20/2020	26.38	23	15
5/21/2020	26.42	24	15
5/22/2020	26.42	26	17
5/23/2020	26.54	27	17
3/23/2020	26.49	25	16

Date	Gauge Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
5/25/2020	26.65	30	19
5/26/2020	27.38	50	32
5/27/2020	27.38	50	33
5/28/2020	28.04	72	46
5/29/2020	31.39	212	137
5/30/2020	32.11	249	161
5/31/2020	33.49	362	234
6/1/2020	32.23	258	167
6/2/2020	30.48	168	109
6/3/2020	29.33	119	77
6/4/2020	29.18	114	74
6/5/2020	30.77	182	118
6/6/2020	30.53	173	112
6/7/2020	32.49	283	183
6/8/2020	33.95	429	277
6/9/2020	33.89	419	271
6/10/2020	33.52	373	241
6/11/2020	33.81	409	264
6/12/2020	33.34	354	229
6/13/2020	32.30	270	175
6/14/2020	31.31	214	138
6/15/2020	32.00	253	164
6/16/2020	32.85	308	199
6/17/2020	31.70	235	152
6/18/2020	30.88	192	124
6/19/2020	30.43	172	111
6/20/2020	30.27	164	106
6/21/2020	29.78	143	92
6/22/2020	29.38	127	82
6/23/2020	30.41	174	112
6/24/2020	33.44	365	236
6/25/2020	33.16	337	218
6/26/2020	31.95	249	161
6/27/2020	30.80	189	122
6/28/2020	30.03	154	100
6/29/2020	29.49	131	85
6/30/2020	29.10	116	75
7/1/2020	28.88	107	69
7/1/2020	30.21	163	105
7/3/2020	31.49	223	144
7/4/2020	30.87	192	124
7/4/2020	31.51	224	145
7/6/2020	32.33	272	176
7/7/2020	33.61	384	248
7/8/2020	33.51	373	241
7/9/2020	32.91	313	202
7/10/2020	32.55	287	185
7/11/2020	33.87	420	271
7/11/2020	33.66	390	252
		300	194
7/13/2020	32.74	300	194

Date	Gauge Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
7/14/2020	31.73	236	153
7/15/2020	31.19	208	134
7/16/2020	31.75	237	153
7/17/2020	30.95	196	127
7/18/2020	30.25	164	106
7/19/2020	30.07	156	101
7/20/2020	30.11	157	101
7/21/2020	30.56	178	115
7/22/2020	31.08	202	131
7/23/2020	30.72	184	119
7/24/2020	30.69	183	118
7/25/2020	30.54	177	114
7/26/2020	30.14	159	103
7/27/2020	29.79	144	93
7/28/2020	32.06	274	177
7/29/2020	34.46	514	332
7/30/2020	34.44	510	330
7/31/2020	34.11	451	291
8/1/2020	33.71	394	255
8/2/2020	33.10	327	211
8/3/2020	32.56	284	184
8/4/2020	31.77	235	152
8/5/2020	32.03	250	162
8/6/2020	33.22	335	217
8/7/2020	32.75	295	191
8/8/2020	32.00	246	159
8/9/2020	31.31	209	135
8/10/2020	31.23	204	132
8/11/2020	30.81	184	119
8/12/2020	31.37	211	136
8/13/2020	31.40	212	137
8/14/2020	30.96	189	122
8/15/2020	30.44	165	107
8/16/2020	30.80	182	118
8/17/2020	32.27	257	166
8/18/2020	32.86	299	193
8/19/2020	33.56	363	235
8/20/2020	32.98	304	196
8/21/2020	32.56	272	176
8/22/2020	32.10	244	158
8/23/2020	32.13	245	158
8/24/2020	31.86	230	149
8/25/2020	31.36	204	132
8/26/2020	30.75	175	113
8/27/2020	30.38	158	102
8/28/2020	30.78	176	114
8/29/2020	30.44	161	104
8/30/2020	30.09	146	94
8/31/2020	30.76	176	114
9/1/2020	32.12	243	157
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Date	Gauge Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
9/2/2020	31.72	222	143
9/3/2020	32.09	242	156
9/4/2020	31.25	198	128
9/5/2020	30.71	173	112
9/6/2020	30.34	156	101
9/7/2020	29.91	138	89
9/8/2020	30.14	148	96
9/9/2020	30.94	183	118
9/10/2020	32.64	287	185
9/11/2020	34.00	417	270
9/12/2020	33.81	390	252
9/13/2020	34.10	432	279
9/14/2020	34.18	444	287
9/15/2020	34.53	514	332
9/16/2020	34.57	522	337
9/17/2020	34.20	449	290
9/18/2020	33.81	389	251
9/19/2020	33.21	321	207
9/20/2020	33.55	362	234
9/21/2020	34.29	464	300
9/22/2020	33.96	411	266
9/23/2020	33.39	338	218
9/24/2020	32.72	280	181
9/25/2020	32.13	244	158
9/26/2020	31.64	218	141
9/27/2020	31.26	198	128
9/28/2020	33.37	349	226
9/29/2020	34.14	437	282
9/30/2020	34.00	417	270
10/1/2020	33.50	350	226
10/2/2020	32.73	281	182
10/3/2020	32.08	240	155
10/4/2020	31.78	224	145
10/5/2020	31.54	212	137
10/6/2020	31.22	195	126
10/7/2020	30.90	180	116
10/8/2020	30.71	171	111
10/9/2020	30.76	173	112
10/10/2020	30.63	168	109
10/11/2020	30.52	163	105
10/11/2020	30.45	159	103
10/13/2020	30.35	155	100
10/14/2020	30.07	143	92
10/15/2020	29.84	133	86
10/15/2020	29.64	125	81
10/17/2020	29.45	117	76
10/18/2020	29.53	120	78
10/19/2020	30.03	140	90
10/20/2020	30.69	168	109
10/21/2020	30.32	152	98
10/21/2020	30.32	104	90

Date	Gauge Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
10/22/2020	30.05	140	90
10/23/2020	30.21	147	95
10/24/2020	30.00	138	89
10/25/2020	29.81	129	83
10/26/2020	29.60	121	78
10/27/2020	29.39	112	72
10/28/2020	29.22	105	68
10/29/2020	29.08	100	64
10/30/2020	28.92	93	60
10/31/2020	28.73	86	56
11/1/2020	28.63	83	53
11/2/2020	29.78	126	81
11/3/2020	30.31	148	96
11/4/2020	29.94	132	85
11/5/2020	29.47	113	73
11/6/2020	29.21	103	67
11/7/2020	29.03	96	62
11/8/2020	29.10	98	64
11/9/2020	29.55	116	75
11/10/2020	31.64	207	134
11/11/2020	33.06	297	192
11/12/2020	34.09	415	268
11/13/2020	34.13	421	272
11/14/2020	33.69	357	231
11/15/2020	33.02	287	185
11/16/2020	32.32	240	155
11/17/2020	31.85	215	139
11/18/2020	31.35	190	123
11/19/2020	30.78	164	106
11/20/2020	30.40	147	95
11/21/2020	30.17	137	89
11/22/2020	30.07	133	86
11/23/2020	29.99	129	83
11/24/2020	29.69	117	76
11/25/2020	29.40	105	68
11/26/2020	29.29	101	65
11/27/2020	29.17	96	62
11/28/2020	29.05	92	59
11/29/2020	28.93	87	56
11/30/2020	28.86	84	54
12/1/2020	28.78	81	52
12/2/2020	28.61	75	49
12/3/2020	28.49	71	46
12/4/2020	28.42	68	44
12/5/2020	28.36	66	43
12/6/2020	28.30	64	41
12/7/2020	28.41	67	44
, . ,		69	45

USGS Gauge Height and Discharge Data

USGS 02233475 LITTLE ECONLOCKHATCHEE R. AT SR 434 NR OVIEDO, FL

Date	Gauge Height (ft)	Stream Flow (ft ³ /s)	Discharge (MGD)
12/9/2020	28.30	63	41
12/10/2020	28.26	62	40
12/11/2020	28.28	62	40
12/12/2020	28.20	60	39
12/13/2020	28.13	58	37
12/14/2020	28.08	56	36
12/15/2020	28.03	55	35
12/16/2020	27.96	52	34
12/17/2020	28.02	54	35
12/18/2020	27.94	52	33
12/19/2020	27.85	49	32
12/20/2020	27.80	48	31
12/21/2020	27.82	48	31
12/22/2020	27.79	47	30
12/23/2020	27.76	46	30
12/24/2020	27.78	47	30
12/25/2020	27.93	51	33
12/26/2020	27.90	50	33
12/27/2020	27.77	46	30
12/28/2020	27.71	45	29
12/29/2020	27.67	44	28
12/30/2020	27.65	43	28
12/31/2020	27.62	42	27

Average 29.46 141 91

Appendix B 2020 Little Econlockhatchee River and St. Johns River Monthly Water Quality Data

Index:

FDEP Analysis Code: J Code

Station	Date	Sample Time	Unionize Ammoni (mg/L)		TKN (mg/L)	Nitrate/Nitrite (mg/L)	Total N (mg/L)	Total P (mg/L)	CBOD (mg/L)	Chlorophyll a (mg/m3)	pH (s.u.)	Dissolved O2 (mg/L)	Conductivity (uhmos)	Temp (°C)	Depth (in)	Secchi Depth (in)
R1	1/6/2020	0905	< 0.01	0.04	1.83	0.11	1.94	0.067	< 2.0	5.34	7.29	7.56	716	15.6	24.0	24.0
R1	2/3/2020	0825	< 0.01	0.06	1.5	0.19	1.69	0.084	< 2.0	3.20	7.51	7.05	730	15.0	16.0	16.0
R1	3/2/2020	0845	< 0.01	0.08	1.21	0.14	1.35	0.084	< 2.0	8.01	7.63	5.87	1020	17.3	15.0	15.0
R1	4/8/2020	0815	< 0.01	0.12	1.48	0.10	1.58	0.060	< 2.0	5.34	7.70	4.61	1750	24.0	10.0	10.0
R1	5/6/2020	0805	< 0.01	0.07	1.66	0.04	1.70	0.079	< 2.0	5.87	7.36	4.07	1040	26.3	8.0	8.0
R1	6/3/2020	0815	< 0.01	0.14	1.52	0.08	1.60	0.108	< 2.0	6.41	7.46	4.28	1950	26.9	8.5	8.5
R1	7/8/2020	0745	< 0.01	0.09	1.57	0.05	1.62	0.091	< 2.0	2.14	7.00	2.17	1010	28.8	23.5	23.5
R1	8/12/2020	0835	< 0.01	0.08	1.8	0.03	1.83	0.090	< 2.0	< 0.80	6.72	1.26	721	29.2	12.0	12.0
R1	9/16/2020	0835	< 0.0	0.08	1.65	0.04	1.69	0.078	< 2.0	< 0.80	6.87	1.54	583	28.6	24.0	13.5
R1	10/7/2020	0825	< 0.01	0.06	1.46	0.02	1.48	0.062	< 2.0	1.07	6.58	1.19	409	26.8	33.0	19.0
R1	11/18/2020	0735	< 0.01	0.05	1.09	0.05	1.14	0.077	< 2.0	< 0.80	6.89	6.98	393	20.6	32.0	21.0
R1	12/9/2020	0750	< 0.01	0.02	1.13	0.04	1.17	0.048	< 2.0	1.07	7.16	5.41	371	13.5	16.0	16.0
Average			< 0.01	0.07	1.49	0.07	1.57	0.077	< 2.0	< 3.40	7.18	4.33	891	22.7	18.5	15.5

Station	Date	Sample Time	Union Ammo (mg/	nia	Total Ammonia (mg/L)	TKN (mg/L)	Nitrate/Nitrite (mg/L)	Total N (mg/L)	Total P (mg/L)	CBOD (mg/L	Chlorophyll a (mg/m3)	pH (s.u.)	Dissolved O2 (mg/L)	Conductivity (uhmos)	Temp (°C)	Depth (in)	Secchi Depth (in)
R5	1/6/2020	0945	< 0.	01	0.03	1.09	0.06	1.15	0.053	< 2.0	1.07	7.70	6.24	769	15.7	70.0	38.8
R5	2/3/2020	0925	< 0.	01	0.04	1.20	0.12	1.32	0.063	< 2.0	1.07	7.47	7.21	861	14.8	52.5	36.0
R5	3/2/2020	0935	< 0.	01	0.08	1.10	0.02	1.12	0.066	< 2.0	2.14	7.59	7.27	1310	16.8	48.5	35.5
R5	4/8/2020	0910	< 0.	01	0.09	0.96	0.14	1.10	0.093	< 2.0	3.20	7.53	4.53	1610	24.4	40.0	29.8
R5	5/6/2020	0845	< 0.	01	0.10	1.36	0.04	1.40	0.101	< 2.0	2.67	7.42	3.34	2010	27.1	32.3	23.5
R5	6/3/2020	0910	< 0.	01	0.11	1.09	0.07	1.16	0.063	< 2.0	2.14	7.05	4.31	1730	26.6	45.0	27.3
R5	7/8/2020	0855	< 0.	01	0.07	1.14	0.08	1.22	0.059	< 2.0	1.07	6.87	3.50	754	27.5	58.8	26.0
R5	8/12/2020	0920	< 0.	01	0.05	1.46	0.05	1.51	0.080	< 2.0	< 0.80	6.76	1.82	819	29.4	83.5	24.5
R5	9/16/2020	0935	< 0.	01	0.05	1.02	0.05	1.07	0.064	< 2.0	< 0.80	6.54	2.01	350	27.3	117.0	26.0
R5	10/7/2020	0920	< 0.	01	0.05	1.11	0.05	1.16	0.066	< 2.0	1.60	6.72	1.61	384	26.5	108.0	22.3
R5	11/18/2020	0830	< 0.	01	0.01	0.82	0.06	0.88	0.069	< 2.0	< 0.80	6.99	4.52	345	21.0	89.0	30.5
R5	12/9/2020	0845	< 0.	01	0.01	0.98	0.06	1.04	0.042	< 2.0	< 0.80	7.31	7.04	441	13.7	86.0	36.0
Average			< 0.	01	0.06	1.11	0.07	1.18	0.068	< 2.0	< 1.51	7.16	4.45	949	22.6	69.2	29.7

Station	Date	Sample Time	Α	nionized ammonia (mg/L)	Total Ammonia (mg/L)	TKN (mg/L)	Nitrate/Nitrite (mg/L)	Total N (mg/L)	Total P (mg/L)	СВ	OD (mg/L)		nlorophyll a (mg/m3)	pH (s.u.)	Dissolved O2 (mg/L)	Conductivity (uhmos)	Temp (°C)	Depth (in)	Secchi Depth (in)
Econ Up	1/6/2020	1040	<	0.01	0.04	0.57	0.20	0.77	0.089	<	2.0	<	0.80	7.10	7.20	161	17.5	27.5	27.5
Econ Up	2/3/2020	1010	<	0.01	0.01	0.40	0.18	0.58	0.062	<	2.0		3.74	7.22	6.95	122	16.2	26.0	26.0
Econ Up	3/2/2020	1035	<	0.01	0.05	0.47	0.13	0.6	0.057	<	2.0	<	0.80	7.19	7.05	179	17.7	25.5	25.5
Econ Up	4/8/2020	0950	<	0.01	0.05	0.46	0.10	0.56	0.062	<	2.0	<	0.80	7.19	5.15	223	23.7	12.0	12.0
Econ Up	5/6/2020	0925	<	0.01	0.04	0.37	0.14	0.51	0.051	<	2.0	<	0.80	7.12	4.40	228	25.8	13.0	13.0
Econ Up	6/3/2020	0955	<	0.01	0.11	0.71	0.19	0.9	0.087	<	2.0		1.60	6.84	4.27	197	27	30.0	30.0
Econ Up	7/8/2020	0955	<	0.01	0.06	0.52	0.10	0.62	0.04	<	2.0	<	0.80	6.63	4.28	151	27.3	36.0	36.0
Econ Up	8/12/2020	1020	<	0.01	0.04	0.63	0.15	0.78	0.087	<	2.0	<	0.80	6.88	3.94	179	28.8	24.0	24.0
Econ Up	9/16/2020	1035	<	0.01	0.05	0.76	0.11	0.87	0.072	<	2.0		1.60	6.60	4.46	137	26.8	34.0	34.0
Econ Up	10/7/2020	1010	<	0.01	0.07	0.75	0.20	0.95	0.077	<	2.0	<	0.80	6.95	5.36	180	26.2	32.0	32.0
Econ Up	11/18/2020	0935	<	0.01	0.03	0.61	0.14	0.75	0.073	<	2.0	<	0.80	6.87	5.20	150	21.9	42.0	42.0
Econ Up	12/9/2020	0920	<	0.01	0.04	0.54	0.27	0.81	0.06	<	2.0	<	0.80	7.25	7.42	157	15.6	18.0	18.0
Average	•	•	<	0.01	0.05	0.57	0.16	0.73	0.068	<	2.0	<	1.18	6.99	5.47	172	22.9	26.7	26.7

Station	Date	Sample Time	Α	nionized mmonia (mg/L)	Total Ammonia (mg/L)		Nitrate/Nitrite (mg/L)	Total N (mg/L)	Total P (mg/L)	СВ	OD (mg/L)		hlorophyll a (mg/m3)	pH (s.u.)	Dissolved O2 (mg/L)	Conductivity (uhmos)	Temp (°C)	Depth (in)	Secchi Depth (in)
Econ Down	1/6/2020	1055	<	0.01	0.04	0.61	0.24	0.85	0.062	<	2.0	<	0.80	7.13	6.91	179	17.8	51.0	51.0
Econ Down	2/3/2020	1030	<	0.01	0.02	0.49	0.29	0.78	0.078	<	2.0		1.60	7.14	5.20	224	17.3	27.0	22.0
Econ Down	3/2/2020	1055	<	0.01	0.15	0.67	0.25	0.92	0.127	<	2.0	<	0.80	7.25	6.56	247	18.9	23.0	23.0
Econ Down	4/8/2020	1000	<	0.01	0.04	0.52	0.37	0.89	0.073	<	2.0	<	0.80	7.25	5.30	295	24.1	15.0	15.0
Econ Down	5/6/2020	0955	<	0.01	0.03	0.54	0.52	1.06	0.100	<	2.0	<	0.80	7.11	3.48	379	26.4	10.0	10.0
Econ Down	6/3/2020	1015	<	0.01	0.10	0.80	0.30	1.10	0.118	<	2.0		1.60	6.96	4.10	243	27.2	37.0	37.0
Econ Down	7/8/2020	1015	<	0.01	0.06	0.74	0.15	0.89	0.079	<	2.0	<	0.80	6.75	4.21	161	27.3	48.0	48.0
Econ Down	8/12/2020	1045	<	0.01	0.06	0.71	0.21	0.92	0.090	<	2.0	<	0.80	6.74	3.68	193	28.8	74.0	47.0
Econ Down	9/16/2020	1010	<	0.01	0.08	0.74	0.12	0.86	0.066	<	2.0		1.07	6.62	3.97	143	26.9	42.0	42.0
Econ Down	10/7/2020	1030	<	0.01	0.06	0.57	0.24	0.81	0.077	<	2.0	<	0.80	6.97	5.90	195	26.3	39.0	39.0
Econ Down	11/18/2020	0955	<	0.01	0.03	0.52	0.25	0.77	0.067	<	2.0	<	0.80	7.00	4.88	164	22.0	53.0	35.0
Econ Down	12/9/2020	0940	<	0.01	0.04	0.61	0.43	1.04	0.062	<	2.0	<	0.80	7.24	6.35	185	16.3	28.0	28.0
Average	•	•	<	0.01	0.06	0.63	0.28	0.91	0.083	<	2.0	<	0.96	7.01	5.05	217	23.3	37.3	33.1

Appendix C 2020 OEW Monthly Water Quality and Performance Data

Index:

ND: Not Documented NS: Not Sampled

FDEP Analysis Code: J Code

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WLWP1

ALK-B	CBOD-B	CHLORO	CL-B	CON-B	DO-B	NH3-B	NH3U-B	NOX-B	OP-B	PH-B	SO4-B	STOC-B	TDS	TEMP-B	TKN-B	TN	TP-B	TSS-B
118	< 2.0	< 0.80	70.5	540	6.87	0.02	0.01	2.06	0.079	7.10	24.7	7.42	300	25.0	0.85	2.91	0.106	< 1.0
125	< 2.0	< 0.80	75.1	554	7.35	0.03	0.01	0.63	0.194	7.04	28.4	7.56	286	24.5	0.78	1.41	0.226	< 1.0
129	< 2.0	< 0.80	80.4	574	7.70	0.04	0.01	0.29	0.340	7.04	26.3	7.56	328	24.9	0.93	1.22	0.362	< 1.0
124	< 2.0	< 0.80	79.6	624	6.84	0.04	0.01	2.81	0.090	7.09	19.9	6.95	316	27.3	0.98	3.79	0.112	< 1.0
130	< 2.0	< 0.80	77.5	624	5.75	0.04	0.01	1.41	0.199	7.14	25.7	6.60	312	27.6	0.82	2.23	0.217	< 1.0
117	< 2.0	< 0.80	74.8	618	6.13	0.05	0.01	1.26	0.132	6.89	25.6	7.66	326	29.3	0.72	1.98	0.145	< 1.0
107	< 2.0	< 0.80	71.2	616	6.67	0.04	0.01	2.42	0.105	7.04	25.7	6.67	308	30.3	0.82	3.24	0.132	< 1.0
106	< 2.0	1.60	65.3	579	5.26	0.01	0.01	1.00	0.220	6.92	23.8	7.34	274	30.7	0.55	1.55	0.238	1.4
104	< 2.0	< 0.80	72.7	573	5.77	0.03	0.01	1.93	0.090	6.86	23.6	6.92	280	30.1	0.67	2.60	0.121	< 1.0
107	< 2.0	< 0.80	68.1	557	7.32	0.05	0.01	1.26	0.171	6.91	25.7	7.36	316	29.1	0.76	2.02	0.200	< 1.0
105	< 2.0	< 0.80	61.2	492	6.21	0.01	0.01	1.98	0.094	6.93	25.4	7.34	274	28.2	0.66	2.64	0.128	< 1.0
116	< 2.0	< 0.80	68.6	534	6.24	0.01	0.01	4.03	0.117	7.21	27.1	6.40	264	25.7	0.88	4.91	0.129	< 1.0
116	- 20	- 0.97	72.1	574	6.51	0.03	0.01	1 76	0.152	7.01	25.2	7 15	200	27.7	0.70	2.54	0.176	< 1.0
	118 125 129 124 130 117 107 106 104 107 105	118	118 < 2.0	118 < 2.0	118 < 2.0	118 < 2.0	118 < 2.0	118 < 2.0	118 < 2.0	118 < 2.0	118 < 2.0	118 < 2.0	118	118	118	118	118	118

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL1X

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	< 2.0	< 0.80	458	1.12	0.03	0.03	0.034	6.99	16.1	0.46	0.49	0.053	< 1.0	27.4
2/4/2020	< 2.0	< 0.80	483	1.24	0.03	0.04	0.161	6.95	16.8	0.48	0.52	0.169	1.2	27.5
3/3/2020	< 2.0	< 0.80	518	0.53	0.04	< 0.01	0.253	6.93	16.8	0.66	0.66	0.253	< 1.0	27.4
4/6/2020	< 2.0	5.87	549	0.33	0.03	< 0.01	0.150	6.87	21.2	0.61	0.61	0.153	5.2	27.5
5/4/2020	< 2.0	1.60	561	2.13	0.01	< 0.01	0.067	6.90	22.0	0.53	0.53	0.066	< 1.0	27.3
6/1/2020	< 2.0	< 0.80	589	0.99	0.05	< 0.01	0.177	6.89	26.7	0.70	0.70	0.176	2.4	27.5
7/6/2020	< 2.0	1.07	571	0.36	0.05	< 0.01	0.133	6.84	26.8	0.42	0.42	0.136	1.2	27.5
8/10/2020	< 2.0	< 0.80	584	0.10	0.03	< 0.01	0.153	6.75	28.5	0.48	0.48	0.153	< 1.0	27.5
9/14/2020	< 2.0	< 0.80	562	0.32	0.07	< 0.01	0.189	6.90	27.7	0.53	0.53	0.179	< 1.0	26.5
10/5/2020	< 2.0	< 0.80	511	0.31	0.05	< 0.01	0.184	6.92	25.8	0.37	0.37	0.209	< 1.0	27.5
11/16/2020	< 2.0	< 0.80	486	0.23	0.05	< 0.01	0.099	6.94	25.0	0.31	0.31	0.113	< 1.0	27.5
12/7/2020	< 2.0	< 0.80	448	0.50	0.06	0.26	0.070	7.11	18.8	0.54	0.80	0.085	< 1.0	27.4
Average	< 2.0	< 1.31	527	0.68	0.04	< 0.04	0.139	6.92	22.7	0.51	0.54	0.145	< 1.5	27.4

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL1Y

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	< 2.0	< 0.80	441	0.87	0.01	0.01	0.027	6.92	14.8	0.54	0.55	0.074	< 1.0	27.4
2/4/2020	< 2.0	< 0.80	468	1.30	0.03	0.01	0.120	6.89	15.6	0.50	0.51	0.127	< 1.0	27.5
3/3/2020	< 2.0	< 0.80	497	1.05	0.05	< 0.01	0.101	6.90	16.8	0.64	0.64	0.113	< 1.0	27.4
4/6/2020	< 2.0	1.07	547	0.42	0.03	< 0.01	0.098	6.75	20.2	0.51	0.51	0.110	< 1.0	27.4
5/4/2020	< 2.0	< 0.80	562	0.79	0.02	< 0.01	0.035	6.81	21.0	0.58	0.58	0.055	< 1.0	27.3
6/1/2020	< 2.0	1.07	575	2.47	0.04	< 0.01	0.194	6.87	26.7	0.67	0.67	0.182	1.8	27.5
7/6/2020	< 2.0	1.60	567	0.18	0.04	< 0.01	0.097	6.84	26.7	0.50	0.50	0.110	< 1.0	27.5
8/10/2020	< 2.0	< 0.80	591	0.29	0.02	< 0.01	0.137	6.83	29.2	0.46	0.46	0.138	< 1.0	27.5
9/14/2020	< 2.0	1.07	569	0.32	0.10	< 0.01	0.111	6.94	28.2	0.63	0.63	0.116	1.4	27.6
10/5/2020	< 2.0	1.07	517	0.39	0.09	< 0.01	0.348	6.95	26.3	0.58	0.58	0.435	< 1.0	27.6
11/16/2020	< 2.0	1.60	477	0.52	0.05	< 0.01	0.099	7.03	26.0	0.38	0.38	0.121	< 1.0	27.5
12/7/2020	2.1	< 0.80	456	0.68	0.05	0.54	0.155	7.19	19.5	0.52	1.06	0.154	1.1	27.5
Average	< 2.0	< 1.02	522	0.77	0.04	< 0.05	0.127	6.91	22.6	0.54	0.59	0.145	< 1.1	27.5

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL2X

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	1.07	468	0.55	0.03	0.01	6.98	16.9	0.46	0.47	0.091	< 1.0	27.3
2/5/2020	< 2.0	24.60	497	0.35	0.04	< 0.01	6.92	17.9	0.51	0.51	0.204	< 1.0	27.2
3/4/2020	< 2.0	1.60	552	0.29	0.04	< 0.01	6.96	20.9	0.54	0.54	0.244	< 1.0	27.3
4/7/2020	< 2.0	2.14	575	0.12	0.04	< 0.01	6.94	21.9	0.73	0.73	0.138	< 1.0	27.3
5/5/2020	< 2.0	< 0.80	598	0.19	0.02	< 0.01	6.90	24.0	0.66	0.66	0.106	< 1.0	27.1
6/2/2020	2.8	1.07	604	0.06	0.08	< 0.01	6.90	28.4	0.52	0.52	0.074	< 1.0	27.3
7/6/2020	< 2.0	2.14	588	0.05	0.09	< 0.01	6.78	28.3	0.28	0.28	0.173	< 1.0	27.4
8/11/2020	2.1	< 0.80	600	0.01	0.08	< 0.01	6.81	30.3	0.55	0.55	0.204	< 1.0	27.5
9/15/2020	< 2.0	5.34	573	0.02	0.10	< 0.01	6.90	28.7	0.65	0.65	0.163	< 1.0	27.5
10/6/2020	< 2.0	1.60	519	3.01	0.09	< 0.01	7.14	27.3	0.60	0.60	0.330	< 1.0	27.5
11/16/2020	< 2.0	1.07	484	0.22	0.09	0.04	6.96	25.8	0.44	0.48	0.080	< 1.0	27.4
12/7/2020	8.1	1.07	450	1.38	0.05	0.29	6.95	19.3	0.53	0.82	0.097	< 1.0	27.3
Average	< 2.6	< 3.61	542	0.52	0.06	< 0.04	6.93	24.1	0.54	0.57	0.159	< 1.0	27.3

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL2Y

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	< 0.80	464	0.96	0.02	0.05	0.090	6.99	16.6	0.40	0.45	0.099	< 1.0	27.1
2/5/2020	< 2.0	< 0.80	493	0.60	0.03	0.05	0.154	6.92	17.7	0.46	0.51	0.165	< 1.0	27.0
3/4/2020	< 2.0	< 0.80	557	0.56	0.03	0.02	0.208	6.85	21.7	0.50	0.52	0.202	< 1.0	27.1
4/7/2020	< 2.0	1.07	567	0.20	0.03	< 0.01	0.267	6.92	21.3	0.61	0.61	0.281	< 1.0	27.1
5/5/2020	< 2.0	< 0.80	594	0.76	0.01	< 0.01	0.095	6.89	23.1	0.73	0.73	0.120	3.3	26.9
6/2/2020	2.6	1.60	436	1.41	0.05	< 0.01	0.169	6.90	27.2	0.62	0.62	0.154	< 1.0	27.1
7/6/2020	< 2.0	1.60	591	0.05	0.07	< 0.01	0.080	6.73	28.4	0.32	0.32	0.095	< 1.0	27.2
8/11/2020	< 2.0	1.07	596	0.04	0.05	< 0.01	0.135	6.80	29.7	0.50	0.50	0.154	< 1.0	27.3
9/15/2020	< 2.0	1.60	570	0.05	0.06	< 0.01	0.114	6.87	28.3	0.60	0.60	0.130	7.0	27.3
10/6/2020	< 2.0	1.07	513	2.25	0.05	< 0.01	0.099	7.06	27.2	0.48	0.48	0.135	< 1.0	27.2
11/16/2020	< 2.0	3.20	489	0.43	0.06	< 0.01	0.069	6.95	25.6	0.43	0.43	0.099	< 1.0	27.2
12/7/2020	< 2.0	< 0.80	445	0.94	0.06	0.13	0.094	7.09	18.5	0.58	0.71	0.105	< 1.0	27.1
Average	< 2.1	< 1.27	526	0.69	0.04	< 0.03	0.131	6.91	23.8	0.52	0.54	0.145	< 1.7	27.1

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL2Z

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	< 0.80	445	1.86	0.02	0.01	0.101	7.01	15.7	0.40	0.41	0.124	< 1.0	27.1
2/5/2020	< 2.0	< 0.80	485	0.79	0.04	0.02	0.179	6.92	16.8	0.45	0.47	0.179	< 1.0	27.0
3/4/2020	< 2.0	< 0.80	565	1.05	0.03	< 0.01	0.216	6.93	22.3	0.52	0.52	0.209	< 1.0	27.1
4/7/2020	< 2.0	1.60	565	0.27	0.02	< 0.01	0.208	7.02	20.8	0.64	0.64	0.227	< 1.0	27.0
5/5/2020	< 2.0	< 0.80	614	0.11	0.02	< 0.01	0.125	7.05	24.0	0.72	0.72	0.144	< 1.0	26.9
6/2/2020	< 2.0	< 0.80	612	0.10	0.04	< 0.01	0.088	6.97	26.9	0.46	0.46	0.100	< 1.0	27.1
7/6/2020	< 2.0	< 0.80	591	0.73	0.03	< 0.01	0.026	6.75	28.8	0.45	0.45	0.046	< 1.0	27.1
8/11/2020	< 2.0	1.60	595	0.19	0.02	< 0.01	0.156	6.75	29.6	0.46	0.46	0.206	< 1.0	27.2
9/15/2020	< 2.0	< 0.80	567	0.16	0.03	< 0.01	0.077	6.90	28.0	0.50	0.50	0.095	< 1.0	27.3
10/6/2020	< 2.0	1.07	513	2.08	0.04	< 0.01	0.159	7.07	27.1	0.52	0.52	0.192	< 1.0	27.2
11/16/2020	< 2.0	< 0.80	489	0.22	0.04	< 0.01	0.068	6.95	25.4	0.27	0.27	0.104	< 1.0	27.2
12/7/2020	< 2.0	< 0.80	431	1.80	0.03	0.05	0.059	7.09	17.1	0.50	0.55	0.068	1.3	27.1
Average	< 2.0	< 0.96	539	0.78	0.03	< 0.01	0.122	6.95	23.5	0.49	0.50	0.141	< 1.0	27.1

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL3A

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	< 2.0	< 0.80	415	8.06	0.02	< 0.01	0.076	6.76	12.8	0.50	0.50	0.088	< 1.0	22.9
2/4/2020	< 2.0	2.67	458	6.57	0.04	< 0.01	0.150	6.90	14.7	0.57	0.57	0.158	2.2	22.9
3/3/2020	< 2.0	3.20	488	1.29	0.05	< 0.01	0.114	6.84	16.2	0.69	0.69	0.147	1.8	22.8
4/6/2020	< 2.0	< 0.80	525	1.68	0.03	< 0.01	0.019	6.77	20.2	0.63	0.63	0.031	1.6	22.9
5/4/2020	< 2.0	< 0.80	558	2.13	0.01	< 0.01	0.013	6.72	20.9	0.59	0.59	< 0.030	< 1.0	22.8
6/1/2020	< 2.0	< 0.80	583	0.83	0.04	< 0.01	0.099	6.89	26.4	0.57	0.57	0.102	6.8	22.9
7/6/2020	< 2.0	< 0.80	559	1.20	0.03	< 0.01	0.082	6.88	26.1	0.51	0.51	0.100	1.3	23.0
8/10/2020	< 2.0	< 0.80	586	0.47	< 0.01	< 0.01	0.120	6.78	28.6	0.62	0.62	0.142	7.0	23.0
9/14/2020	< 2.0	1.07	561	0.25	0.03	< 0.01	0.219	6.83	27.0	0.58	0.58	0.233	5.2	23.0
10/5/2020	< 2.0	1.07	507	0.56	0.03	< 0.01	0.177	6.93	25.3	0.54	0.54	0.236	2.8	23.0
11/16/2020	< 2.0	< 0.80	477	0.29	0.02	< 0.01	0.038	6.93	25.0	0.30	0.30	0.067	4.6	23.0
12/7/2020	< 2.0	< 0.80	429	0.94	< 0.01	< 0.01	0.070	7.05	16.7	0.50	0.50	0.083	< 1.0	22.9
		_												
Average	< 2.0	< 1.20	512	2.02	< 0.03	< 0.01	0.098	6.86	21.7	0.55	0.55	< 0.118	< 3.0	22.9

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL3X

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	< 2.0	< 0.80	431	5.25	< 0.01	0.03	0.089	7.10	13.8	0.46	0.49	0.101	< 1.0	22.8
2/4/2020	< 2.0	< 0.80	458	4.72	0.03	0.02	0.155	7.06	14.8	0.58	0.60	0.166	4.5	22.8
3/3/2020	< 2.0	< 0.80	496	5.02	0.04	< 0.01	0.099	7.08	17.1	0.73	0.73	0.105	< 1.0	22.8
4/6/2020	< 2.0	1.07	531	2.59	0.02	< 0.01	0.054	6.89	20.2	0.61	0.61	0.086	< 1.0	20.0
5/4/2020	< 2.0	4.27	565	1.01	0.01	< 0.01	0.030	6.85	21.4	0.53	0.53	0.043	2.6	22.6
6/1/2020	< 2.0	< 0.80	558	1.01	0.03	< 0.01	0.056	6.90	26.3	0.57	0.57	0.099	< 1.0	22.8
7/6/2020	< 2.0	< 0.80	550	0.93	0.03	< 0.01	0.053	6.80	25.8	0.53	0.53	0.059	< 1.0	22.8
8/10/2020	< 2.0	< 0.80	579	1.23	< 0.01	< 0.01	0.130	6.79	28.0	0.61	0.61	0.161	10.1	22.7
9/14/2020	< 2.0	1.60	557	1.03	0.02	0.01	0.268	6.93	26.6	0.60	0.61	0.280	< 1.0	22.8
10/5/2020	< 2.0	< 0.80	499	1.74	0.03	0.01	0.127	6.94	24.6	0.49	0.50	0.152	1.3	22.8
11/16/2020	< 2.0	< 0.80	489	1.55	< 0.01	0.02	0.215	7.04	24.3	0.39	0.41	0.229	< 1.0	22.9
12/7/2020	< 2.0	< 0.80	425	3.95	< 0.01	0.01	0.075	7.18	16.6	0.50	0.51	0.085	< 1.0	22.8
		_												
Average	< 2.0	< 1.18	512	2.50	< 0.02	< 0.01	0.113	6.96	21.6	0.55	0.56	0.131	< 2.2	22.6

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL4X

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	< 2.0	< 0.80	424	3.48	0.04	< 0.01	0.080	6.98	13.4	0.53	0.53	0.102	< 1.0	22.8
2/4/2020	< 2.0	< 0.80	456	3.34	0.04	< 0.01	0.158	6.98	14.7	0.59	0.59	0.170	< 1.0	22.7
3/3/2020	< 2.0	< 0.80	479	2.47	0.06	< 0.01	0.079	6.96	15.8	0.84	0.84	0.090	< 1.0	22.7
4/6/2020	< 2.0	< 0.80	541	0.35	0.03	< 0.01	0.026	6.81	20.1	0.61	0.61	0.041	< 1.0	22.7
5/4/2020	< 2.0	< 0.80	573	1.50	< 0.01	< 0.01	0.017	6.76	22.0	0.64	0.64	0.049	< 1.0	22.5
6/1/2020	< 2.0	< 0.80	564	1.35	0.04	< 0.01	0.065	6.79	26.5	0.46	0.46	0.069	1.0	22.7
7/6/2020	< 2.0	< 0.80	540	0.14	0.03	< 0.01	0.025	6.77	26.0	0.61	0.61	0.044	1.1	22.8
8/10/2020	< 2.0	1.07	582	1.24	< 0.01	< 0.01	0.133	6.74	28.0	0.43	0.43	0.146	2.9	22.8
9/14/2020	< 2.0	< 0.80	558	0.98	0.03	< 0.01	0.227	6.79	26.8	0.52	0.52	0.256	< 1.0	22.7
10/5/2020	< 2.0	< 0.80	502	1.23	0.04	< 0.01	0.149	6.91	24.6	0.48	0.48	0.174	1.0	22.8
11/16/2020	< 2.0	< 0.80	485	1.23	0.02	< 0.01	0.170	6.98	23.8	0.29	0.29	0.219	1.0	22.7
12/7/2020	< 2.0	< 0.80	425	3.46	< 0.01	0.10	0.101	7.00	16.5	0.49	0.59	0.121	< 1.0	22.7
Average	< 2.0	< 0.82	511	1.73	< 0.03	< 0.02	0.103	6.87	21.5	0.54	0.55	0.123	< 1.2	22.7

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL5A

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	< 0.80	445	2.00	0.03	0.02	0.093	6.93	14.7	0.42	0.44	0.111	< 1.0	23.2
2/5/2020	< 2.0	1.07	473	1.62	0.04	0.02	0.149	6.85	15.6	0.50	0.52	0.157	< 1.0	23.2
3/4/2020	< 2.0	3.20	511	1.22	0.02	< 0.01	0.165	6.84	18.1	0.62	0.62	0.186	1.0	23.3
4/7/2020	< 2.0	1.60	540	0.62	0.03	< 0.01	0.114	6.79	20.3	0.63	0.63	0.112	< 1.0	23.2
5/5/2020	< 2.0	< 0.80	583	0.87	< 0.01	< 0.01	0.071	6.86	22.6	0.71	0.71	0.078	< 1.0	23.2
6/2/2020	< 2.0	< 0.80	596	0.60	0.04	< 0.01	0.156	6.87	26.9	0.45	0.45	0.144	< 1.0	23.2
7/7/2020	< 2.0	< 0.80	532	0.33	0.03	< 0.01	0.085	6.75	26.0	0.33	0.33	0.102	< 1.0	23.3
8/11/2020	< 2.0	< 0.80	579	0.39	0.02	< 0.01	0.100	6.74	28.7	0.43	0.43	0.106	< 1.0	23.2
9/15/2020	< 2.0	< 0.80	573	0.54	0.03	< 0.01	0.113	6.82	27.7	0.51	0.51	0.132	< 1.0	23.2
10/6/2020	< 2.0	< 0.80	511	0.59	0.04	< 0.01	0.057	7.04	27.0	0.49	0.49	0.088	< 1.0	23.2
11/16/2020	< 2.0	< 0.80	494	0.53	0.04	< 0.01	0.080	6.97	25.3	0.42	0.42	0.098	< 1.0	23.3
12/7/2020	< 2.0	4.27	437	2.20	0.04	0.06	0.060	7.06	17.6	0.52	0.58	0.072	< 1.0	23.2
		_												
Average	< 2.0	< 1.38	523	0.96	< 0.03	< 0.02	0.104	6.88	22.5	0.50	0.51	0.116	< 1.0	23.2

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL5X

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	< 0.80	457	1.37	0.02	0.04	0.094	6.97	15.9	0.42	0.46	0.123	< 1.0	23.3
2/5/2020	< 2.0	< 0.80	485	1.12	0.03	0.04	0.154	6.92	17.0	0.48	0.52	0.163	< 1.0	23.3
3/4/2020	< 2.0	< 0.80	521	0.85	0.04	< 0.01	0.238	6.89	18.7	0.59	0.59	0.252	< 1.0	20.4
4/7/2020	< 2.0	1.07	556	0.27	0.02	< 0.01	0.166	6.78	20.6	0.64	0.64	0.164	< 1.0	23.3
5/5/2020	< 2.0	< 0.80	594	0.18	< 0.01	< 0.01	0.067	6.83	23.3	0.61	0.61	0.111	< 1.0	23.2
6/2/2020	< 2.0	< 0.80	583	0.09	0.04	< 0.01	0.169	6.85	26.7	0.46	0.46	0.154	< 1.0	23.4
7/7/2020	< 2.0	1.07	561	0.08	0.04	< 0.01	0.184	6.96	26.8	0.30	0.30	0.188	2.1	23.4
8/11/2020	< 2.0	< 0.80	592	0.19	0.04	< 0.01	0.152	6.80	29.2	0.46	0.46	0.160	< 1.0	23.4
9/15/2020	< 2.0	1.07	565	0.19	0.05	< 0.01	0.126	6.83	27.4	0.55	0.55	0.138	1.1	23.4
10/6/2020	< 2.0	1.07	559	ND	0.06	< 0.01	0.101	6.76	25.9	0.39	0.39	0.133	1.6	23.4
11/16/2020	< 2.0	< 0.80	487	0.08	0.05	< 0.01	0.105	6.90	25.2	0.39	0.39	0.117	< 1.0	23.4
12/7/2020	< 2.0	< 0.80	443	9.10	0.03	0.13	0.090	7.11	18.2	0.52	0.65	0.093	< 1.0	23.3
Average	< 2.0	< 0.89	534	1.23	< 0.04	< 0.03	0.137	6.88	22.9	0.48	0.50	0.150	< 1.2	23.1

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL6X

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	< 0.80	451	2.89	0.01	0.04	0.115	7.08	15.3	0.51	0.55	0.129	< 1.0	23.9
2/5/2020	< 2.0	1.60	480	2.15	0.03	0.02	0.152	7.00	16.5	0.71	0.73	0.171	8.2	23.9
3/4/2020	< 2.0	< 0.80	533	1.60	0.04	< 0.01	0.176	7.05	19.9	0.58	0.58	0.192	1.6	23.9
4/7/2020	< 2.0	1.07	554	0.78	0.02	< 0.01	0.100	7.00	21.0	0.68	0.68	0.105	2.2	23.9
5/5/2020	< 2.0	< 0.80	603	0.41	0.01	< 0.01	0.121	7.00	23.7	0.74	0.74	0.168	< 1.0	23.6
6/2/2020	< 2.0	1.07	599	0.31	0.04	< 0.01	0.074	6.94	26.8	0.44	0.44	0.068	1.8	23.8
7/7/2020	< 2.0	< 0.80	537	0.36	0.03	< 0.01	0.091	6.94	26.6	0.39	0.39	0.115	1.5	24.1
8/11/2020	< 2.0	< 0.80	597	0.78	0.02	0.01	0.167	6.91	29.6	0.51	0.52	0.182	2.3	24.0
9/15/2020	< 2.0	< 0.80	567	0.58	0.03	0.02	0.128	6.87	27.8	0.54	0.56	0.150	< 1.0	24.1
10/6/2020	< 2.0	< 0.80	501	1.12	0.04	0.02	0.138	7.13	26.8	0.51	0.53	0.186	1.3	24.1
11/16/2020	< 2.0	< 0.80	492	1.26	0.02	0.04	0.122	7.02	25.1	0.43	0.47	0.140	1.4	24.1
12/7/2020	< 2.0	< 0.80	433	4.01	0.01	0.06	0.078	7.20	17.6	0.49	0.55	0.084	2.0	24.0
Average	< 2.0	< 0.91	529	1.35	0.03	< 0.02	0.122	7.01	23.1	0.54	0.56	0.141	< 2.1	24.0

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL6Y

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	< 0.80	429	2.62	0.02	< 0.01	0.136	6.98	13.3	0.56	0.56	0.149	< 1.0	23.9
2/5/2020	< 2.0	1.07	459	1.80	0.04	< 0.01	0.149	6.93	14.9	0.49	0.49	0.155	1.0	23.8
2/5/2020	< 2.0	< 0.80	459	1.78	0.04	< 0.01	0.148	6.93	14.9	0.47	0.47	0.153	< 1.0	ND
3/4/2020	< 2.0	< 0.80	529	3.98	0.04	< 0.01	0.192	6.99	18.5	0.59	0.59	0.203	< 1.0	23.8
4/7/2020	< 2.0	1.07	531	0.25	0.03	< 0.01	0.110	6.83	19.1	0.60	0.60	0.113	< 1.0	23.9
5/5/2020	< 2.0	< 0.80	586	0.17	0.02	< 0.01	0.077	6.87	20.8	0.66	0.66	0.124	< 1.0	23.6
6/2/2020	< 2.0	5.34	563	0.10	0.05	< 0.01	0.066	6.85	25.5	0.58	0.58	0.065	3.0	23.8
7/7/2020	< 2.0	< 0.80	494	0.26	0.03	< 0.01	0.036	6.81	25.0	0.33	0.33	0.046	< 1.0	23.9
8/11/2020	< 2.0	1.07	584	0.60	0.02	< 0.01	0.044	6.88	29.0	0.51	0.51	0.066	< 1.0	23.9
9/15/2020	< 2.0	< 0.80	557	0.33	0.03	< 0.01	0.090	6.83	26.7	0.57	0.57	0.098	< 1.0	23.9
10/6/2020	< 2.0	1.07	512	1.46	0.03	< 0.01	0.071	7.11	26.9	0.50	0.50	0.090	< 1.0	23.9
11/16/2020	< 2.0	< 0.80	493	0.67	0.01	< 0.01	0.156	7.02	24.3	0.55	0.55	0.213	< 1.0	23.9
12/7/2020	< 2.0	< 0.80	427	2.86	< 0.01	< 0.01	0.120	7.06	16.4	0.46	0.46	0.120	< 1.0	23.8
Average	< 2.0	< 1.23	509	1.30	< 0.03	< 0.01	0.107	6.93	21.2	0.53	0.53	0.123	< 1.2	23.8

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL7X

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	< 2.0	9.08	437	3.60	0.05	< 0.01	0.216	7.01	14.6	0.73	0.73	0.239	1.4	21.2
2/4/2020	< 2.0	5.34	453	4.62	0.03	< 0.01	0.189	7.03	14.5	0.60	0.60	0.208	1.0	21.1
3/3/2020	< 2.0	4.81	473	4.70	0.06	< 0.01	0.124	7.06	15.4	0.89	0.89	0.140	1.4	21.1
4/6/2020	< 2.0	4.81	565	0.90	0.05	< 0.01	0.033	6.78	20.6	0.76	0.76	0.067	< 1.0	21.1
5/4/2020	< 2.0	1.60	556	0.70	0.06	< 0.01	0.017	6.62	21.0	0.78	0.78	0.036	< 1.0	21.0
6/1/2020	< 2.0	1.60	514	0.05	0.07	< 0.01	0.042	6.50	24.8	0.57	0.57	0.050	1.0	21.2
7/6/2020	7.3	8.01	538	0.16	0.14	< 0.01	0.137	6.63	25.9	0.87	0.87	0.149	1.8	21.1
8/10/2020	< 2.0	3.74	550	0.35	0.08	< 0.01	0.054	6.49	27.2	0.61	0.61	0.095	4.2	21.1
9/14/2020	< 2.0	7.48	548	0.09	0.07	< 0.01	0.088	6.69	26.3	0.68	0.68	0.107	< 1.0	21.2
10/5/2020	< 2.0	2.14	472	0.29	0.07	< 0.01	0.050	6.59	23.5	0.59	0.59	0.083	< 1.0	21.3
11/16/2020	< 2.0	1.07	473	0.04	0.08	< 0.01	0.316	6.81	23.2	0.45	0.45	0.314	< 1.0	21.2
12/7/2020	< 2.0	< 0.80	423	2.41	0.03	< 0.01	0.056	6.96	15.5	0.52	0.52	0.072	< 1.0	21.1
Averege	. 2.4	. 4.04	F00	1.40	0.07	. 0.01	0.110	6.76	24.0	0.67	0.67	0.420	. 1 1	24.4
Average	< 2.4	< 4.21	500	1.49	0.07	< 0.01	0.110	6.76	21.0	0.67	0.67	0.130	< 1.4	21.1

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL8X

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	< 2.0	< 0.80	434	3.50	0.04	0.03	0.166	6.95	13.9	0.62	0.65	0.174	1.0	20.8
2/4/2020	< 2.0	1.07	457	3.56	0.04	0.02	0.179	6.98	14.6	0.51	0.53	0.186	< 1.0	20.7
3/3/2020	< 2.0	1.07	485	2.80	0.04	< 0.01	0.134	6.91	16.3	0.68	0.68	0.141	1.2	20.7
4/6/2020	< 2.0	1.07	546	0.48	0.03	< 0.01	0.113	6.70	19.9	0.56	0.56	0.120	< 1.0	20.7
5/4/2020	< 2.0	1.07	564	0.46	0.01	< 0.01	0.040	6.78	21.7	0.58	0.58	0.061	< 1.0	20.6
6/1/2020	< 2.0	1.07	571	0.18	0.04	< 0.01	0.089	6.81	26.6	0.54	0.54	0.095	< 1.0	20.8
7/6/2020	< 2.0	2.14	532	0.22	0.03	< 0.01	0.133	6.71	26.0	0.56	0.56	0.135	1.3	20.8
8/10/2020	< 2.0	2.14	575	0.89	0.04	< 0.01	0.157	6.79	27.9	0.50	0.50	0.179	3.6	20.9
9/14/2020	< 2.0	2.14	561	1.20	0.03	< 0.01	0.232	6.93	27.2	0.51	0.51	0.245	1.5	20.9
10/5/2020	< 2.0	1.60	497	0.72	0.04	< 0.01	0.103	6.73	24.4	0.52	0.52	0.132	< 1.0	20.9
11/16/2020	< 2.0	< 0.80	486	1.08	0.01	0.01	0.175	6.95	24.4	0.35	0.36	0.202	< 1.0	20.8
12/7/2020	< 2.0	< 0.80	430	2.37	< 0.01	0.06	0.069	7.10	17.0	0.45	0.51	0.085	< 1.0	20.8
Average	< 2.0	< 1.31	512	1.46	< 0.03	< 0.02	0.133	6.86	21.7	0.53	0.54	0.146	< 1.3	20.8

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL8Y

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	< 2.0	< 0.80	430	2.62	0.07	< 0.01	0.253	6.88	13.5	0.76	0.76	0.261	< 1.0	20.7
2/4/2020	< 2.0	< 0.80	441	3.80	0.05	< 0.01	0.232	6.94	13.8	0.54	0.54	0.237	< 1.0	20.7
3/3/2020	< 2.0	3.20	466	3.13	0.05	< 0.01	0.134	6.84	14.9	0.77	0.77	0.144	4.3	20.7
4/6/2020	< 2.0	1.60	568	0.35	0.03	< 0.01	0.072	6.69	20.1	0.69	0.69	0.093	3.4	20.7
5/4/2020	< 2.0	< 0.80	570	0.98	0.02	< 0.01	0.011	6.70	21.4	0.76	0.76	< 0.030	< 1.0	20.6
6/1/2020	< 2.0	1.60	512	0.11	0.05	< 0.01	0.036	6.64	26.2	0.61	0.61	0.047	< 1.0	20.8
7/6/2020	2.8	1.07	526	0.10	0.07	< 0.01	0.082	6.74	26.0	0.65	0.65	0.108	< 1.0	20.8
8/10/2020	< 2.0	1.60	565	1.28	0.04	< 0.01	0.040	6.79	27.8	0.47	0.47	0.079	< 1.0	20.9
9/14/2020	< 2.0	< 0.80	557	0.12	0.05	< 0.01	0.153	6.72	26.3	0.56	0.56	0.160	< 1.0	20.9
10/5/2020	< 2.0	< 0.80	490	0.53	0.04	< 0.01	0.086	6.80	23.9	0.55	0.55	0.106	< 1.0	21.0
11/16/2020	2.1	1.07	494	0.22	0.04	< 0.01	0.305	6.85	23.6	0.51	0.51	0.337	< 1.0	20.9
12/7/2020	< 2.0	< 0.80	420	1.13	0.03	< 0.01	0.097	6.88	15.4	0.57	0.57	0.128	< 1.0	20.8
Average	< 2.1	< 1.25	503	1.20	0.05	< 0.01	0.125	6.79	21.1	0.62	0.62	< 0.144	< 1.5	20.8

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL9X

CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
< 2.0	< 0.80	423	1.95	0.06	< 0.01	0.143	6.94	13.1	0.60	0.60	0.156	< 1.0	20.5
< 2.0	< 0.80	459	1.56	0.06	< 0.01	0.194	6.92	14.9	0.64	0.64	0.205	1.3	20.5
< 2.0	1.60	504	1.34	0.05	< 0.01	0.155	6.91	17.6	0.64	0.64	0.166	2.0	20.5
< 2.0	< 0.80	569	1.63	0.03	< 0.01	0.055	6.84	21.2	0.61	0.61	0.064	3.6	20.4
< 2.0	< 0.80	586	0.47	< 0.01	< 0.01	0.056	6.87	21.9	0.71	0.71	0.097	1.4	20.2
< 2.0	1.07	563	0.39	0.04	< 0.01	0.122	6.89	26.8	0.52	0.52	0.116	1.8	20.6
< 2.0	1.07	522	0.27	0.04	< 0.01	0.081	6.81	25.7	0.66	0.66	0.080	3.2	20.7
< 2.0	1.07	582	0.45	< 0.01	< 0.01	0.156	6.96	28.0	0.47	0.47	0.176	1.9	20.7
< 2.0	< 0.80	560	0.28	0.04	< 0.01	0.157	6.78	26.7	0.59	0.59	0.174	< 1.0	20.6
< 2.0	1.60	504	ND	0.04	< 0.01	0.160	6.92	25.4	0.39	0.39	0.149	5.3	20.8
< 2.0	< 0.80	481	0.20	0.03	< 0.01	0.155	6.93	24.3	0.44	0.44	0.167	< 1.0	20.5
< 2.0	< 0.80	425	2.05	0.03	0.05	0.094	7.07	16.4	0.52	0.57	0.100	1.2	20.5
< 20	< 1.00	515	0.96	< 0.04	< 0.01	0.127	6.90	21.8	0.57	0.57	0.138	< 21	20.5
	< 2.0 < 2.0	 2.0 2.0 0.80 2.0 1.60 2.0 0.80 2.0 0.80 2.0 1.07 2.0 1.07 2.0 0.80 2.0 1.07 2.0 1.07 2.0 0.80 2.0 0.80 2.0 0.80 2.0 0.80 	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL9Y

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	1.07	426	1.27	0.04	0.03	0.090	6.93	13.2	0.50	0.53	0.107	< 1.0	20.6
2/5/2020	< 2.0	< 0.80	461	1.68	0.04	0.03	0.140	6.93	14.7	0.46	0.49	0.150	< 1.0	21.5
3/4/2020	< 2.0	< 0.80	513	2.49	0.05	0.01	0.163	7.03	18.0	0.56	0.57	0.170	< 1.0	19.8
4/7/2020	< 2.0	1.60	553	1.54	0.03	< 0.01	0.156	6.92	20.6	0.56	0.56	0.155	3.4	20.4
5/5/2020	< 2.0	< 0.80	574	0.82	< 0.01	< 0.01	0.068	7.02	21.5	0.62	0.62	0.103	< 1.0	20.2
6/2/2020	< 2.0	< 0.80	522	0.53	0.04	< 0.01	0.145	6.95	25.1	0.60	0.60	0.140	< 1.0	20.7
7/7/2020	< 2.0	2.14	540	0.58	0.03	< 0.01	0.101	6.88	26.3	0.61	0.61	0.113	< 1.0	20.8
8/11/2020	< 2.0	< 0.80	580	0.09	< 0.01	< 0.01	0.137	6.96	28.1	0.50	0.50	0.138	< 1.0	20.8
9/15/2020	< 2.0	< 0.80	563	0.32	0.03	< 0.01	0.147	6.89	27.0	0.50	0.50	0.161	< 1.0	20.7
10/6/2020	< 2.0	1.07	482	ND	0.05	< 0.01	0.101	6.87	24.1	0.67	0.67	0.144	4.9	20.9
11/16/2020	< 2.0	< 0.80	487	0.46	0.03	0.01	0.199	7.05	24.1	0.38	0.39	0.210	< 1.0	20.6
12/7/2020	< 2.0	1.60	427	1.69	0.02	0.05	0.075	7.12	15.9	0.50	0.55	0.079	< 1.0	20.6
Average	< 2.0	< 1.09	511	1.04	< 0.03	< 0.02	0.127	6.96	21.6	0.54	0.55	0.139	< 1.5	20.6

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL10X

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN		TSS-B	WATERLVL
1/8/2020	2.4	< 0.80	432	3.57	0.02	0.01	0.134	7.03	13.7	0.53	0.54	0.146	< 1.0	21.2
2/5/2020	< 2.0	< 0.80	467	2.74	0.03	< 0.01	0.135	7.04	15.3	0.46	0.46	0.153	< 1.0	21.2
3/4/2020	< 2.0	< 0.80	515	2.92	0.03	< 0.01	0.166	7.05	18.1	0.54	0.54	0.175	< 1.0	21.1
4/7/2020	< 2.0	< 0.80	569	3.60	0.02	< 0.01	0.094	7.05	21.9	0.54	0.54	0.097	1.8	21.0
5/5/2020	< 2.0	< 0.80	600	0.76	< 0.01	< 0.01	0.043	6.93	22.7	0.67	0.67	0.063	< 1.0	20.7
6/2/2020	< 2.0	< 0.80	578	0.76	0.04	< 0.01	0.070	6.95	26.2	0.49	0.49	0.064	< 1.0	21.2
7/7/2020	< 2.0	1.60	522	0.78	0.03	< 0.01	0.060	6.81	26.2	0.53	0.53	0.076	2.1	21.3
8/11/2020	< 2.0	< 0.80	582	0.49	< 0.01	< 0.01	0.098	6.90	28.2	0.33	0.33	0.112	1.8	21.3
9/15/2020	< 2.0	< 0.80	536	1.29	0.02	< 0.01	0.141	6.86	26.8	0.54	0.54	0.243	2.0	21.3
10/6/2020	< 2.0	< 0.80	461	ND	0.03	< 0.01	0.102	6.90	25.4	0.46	0.46	0.124	1.6	21.3
11/17/2020	< 2.0	< 0.80	474	1.41	< 0.01	0.02	0.128	7.05	21.5	0.42	0.44	0.146	1.5	21.3
12/7/2020	< 2.0	19.80	428	3.83	< 0.01	0.01	0.100	7.21	16.9	0.44	0.45	0.129	2.7	21.1
Average	< 2.0	< 2.5	514	2.01	< 0.02	< 0.01	0.106	6.98	21.9	0.50	0.50	0.127	< 1.5	21.2

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL10Y

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	< 0.80	417	3.15	0.02	< 0.01	0.221	6.90	12.6	0.54	0.54	0.221	< 1.0	21.3
2/5/2020	< 2.0	< 0.80	445	2.45	0.03	< 0.01	0.154	6.83	14.3	0.46	0.46	0.164	< 1.0	21.2
6/2/2020	2.8	2.67	490	0.21	0.05	< 0.01	0.038	6.78	26.5	0.62	0.62	0.063	< 1.0	21.3
7/7/2020	< 2.0	1.07	480	0.78	0.03	< 0.01	0.011	6.70	25.6	0.60	0.60	< 0.030	< 1.0	21.5
8/11/2020	< 2.0	< 0.80	559	0.23	< 0.01	< 0.01	0.014	6.81	27.9	0.46	0.46	0.033	< 1.0	21.4
9/15/2020	< 2.0	< 0.80	564	0.49	0.02	< 0.01	0.038	6.93	26.5	0.51	0.51	0.066	< 1.0	21.4
10/6/2020	< 2.0	< 0.80	509	ND	0.03	< 0.01	0.023	6.91	24.9	0.42	0.42	0.046	< 1.0	21.4
11/17/2020	< 2.0	1.07	495	5.10	0.01	< 0.01	0.133	6.93	21.4	0.39	0.39	0.147	< 1.0	21.3
12/7/2020	< 2.0	< 0.80	427	3.40	< 0.01	< 0.01	0.118	7.03	16.0	0.47	0.47	0.113	< 1.0	21.2
Average	< 2.1	< 1.07	487	1.98	< 0.02	< 0.01	0.083	6.87	21.7	0.50	0.50	< 0.098	< 1.0	21.3

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: 12X

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	SO4-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	< 2.0	< 0.80	433	0.68	0.03	< 0.01	0.204	6.80	NS	14.1	0.57	0.57	0.207	< 1.0	27.4
2/4/2020	< 2.0	< 0.80	436	0.59	0.04	< 0.01	0.074	6.77	NS	13.5	0.50	0.50	0.094	< 1.0	27.4
3/4/2020	< 2.0	1.60	473	0.25	0.05	< 0.01	0.149	6.72	NS	16.0	0.54	0.54	0.150	2.0	27.3
4/6/2020	2.3	2.14	553	0.05	0.11	< 0.01	0.198	6.63	NS	20.1	1.02	1.02	0.221	1.3	27.2
5/5/2020	< 2.0	3.74	619	0.65	0.10	< 0.01	0.096	6.66	NS	21.8	0.42	0.42	0.100	4.3	27.1
6/1/2020	2.0	2.67	557	0.42	0.14	< 0.01	0.179	ND	NS	25.3	0.91	0.91	0.182	1.4	27.4
7/6/2020	< 2.0	3.20	561	0.15	0.07	< 0.01	0.099	6.60	NS	26.3	0.49	0.49	0.106	< 1.0	27.3
8/10/2020	< 2.0	< 0.80	541	0.14	0.06	< 0.01	0.106	6.66	NS	27.6	0.68	0.68	0.132	1.1	27.4
9/14/2020	2.0	2.14	541	0.32	0.12	< 0.01	0.165	6.73	NS	26.4	0.70	0.70	0.147	< 1.0	27.5
10/5/2020	< 2.0	2.14	484	0.24	0.07	< 0.01	0.103	6.70	NS	24.0	0.54	0.54	0.134	4.0	27.5
11/16/2020	2.0	2.67	484	0.08	0.07	< 0.01	0.284	6.90	NS	23.4	0.57	0.57	0.305	< 1.0	27.5
12/7/2020	< 2.0	< 0.80	418	2.26	0.01	< 0.01	0.054	6.86	17.2	16.2	0.54	0.54	0.068	< 1.0	27.3
Average	< 2.0	< 1.96	508	0.49	0.07	< 0.01	0.143	6.73	17.2	21.2	0.62	0.62	0.154	< 1.7	27.4

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL12Y

Date	ALK-B	CBOD-B	CHLORO	CL-B	CON-B	DO-B	NH3-B	NH3U-B	NOX-B	OP-B	PH-B	SO4-B	STOC-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020 2/4/2020 3/4/2020	NS NS NS	< 2.0 < 2.0 < 2.0	< 0.80 < 0.80 < 0.80	NS NS NS	437 449 497	2.55 1.43 0.76	0.02 0.04 0.03	NS NS NS	< 0.01 0.01 < 0.01	0.084 0.081 0.087	6.87 6.89 6.80	NS NS NS	NS NS NS	14.5 13.9 17.5	0.57 0.45 0.44	0.57 0.46 0.44	0.099 0.084 0.089	< 1.0 < 1.0 < 1.0	27.4 27.3 27.3
4/6/2020	NS	< 2.0	1.07	NS	540	1.10	0.03	NS	< 0.01	0.271	6.71	NS	NS	20.1	0.73	0.73	0.275	< 1.0	27.2
5/5/2020	NS	< 2.0	< 0.80	NS	622	0.35	0.02	NS	< 0.01	0.144	6.70	NS	NS	22.5	0.55	0.55	0.128	< 1.0	27.1
6/1/2020	124	< 2.0	< 0.80	76.1	571	0.13	0.04	< 0.01	< 0.01	0.373	6.73	< 2.0	10.30	26.3	0.61	0.61	0.345	1.2	27.4
7/6/2020	NS	< 2.0	1.07	NS	571	0.08	0.04	NS	< 0.01	0.063	6.66	NS	NS	26.3	0.64	0.64	0.087	1.6	27.3
8/10/2020	NS	< 2.0	< 0.80	NS	564	0.16	0.02	NS	< 0.01	0.065	6.70	NS	NS	28.8	0.36	0.36	0.086	4.3	27.4
9/14/2020	NS	< 2.0	< 0.80	NS	549	0.23	0.06	NS	< 0.01	0.140	6.79	NS	NS	27.3	0.64	0.64	0.150	4.2	27.5
10/5/2020	NS	< 2.0	< 0.80	NS	495	0.32	0.07	NS	< 0.01	0.106	6.77	NS	NS	24.4	0.37	0.37	0.136	1.2	27.6
11/16/2020	NS	< 2.0	< 0.80	NS	466	3.56	0.05	NS	< 0.01	0.339	6.76	NS	NS	23.2	0.22	0.22	0.367	< 1.0	27.5
12/7/2020	NS	< 2.0	< 0.80	69.0	418	2.26	0.01	< 0.01	< 0.01	0.054	6.86	17.2	7.28	16.2	0.54	0.54	0.068	< 1.0	27.3
Average	124.0	< 2.0	< 0.85	72.6	515	1.08	0.04	< 0.01	< 0.01	0.151	6.77	< 9.6	8.79	21.8	0.51	0.51	0.160	< 1.6	27.4

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL13X

Date	ALK-B	CBOD-B	CHLOF	RCCL-B	CON-B	DO-B	NH3-B	NH3U-B	NOX-B	OP-B	PH-B	SO4-B	STOC-B	TEMP-B	TKN-B	TN	TP-B	TSS-B
Date 1/7/2020 2/4/2020 3/3/2020 4/6/2020 5/4/2020 6/1/2020 7/6/2020 8/10/2020 9/14/2020	121 126 122 88 77 70 76 94 128	 CBOD-B 2.0 2.0 2.0 2.0 3.0 2.1 2.1 2.0 2.0 2.0 	2.14 1.60 2.67 1.60 6.94 4.27 3.74 4.81 4.27	73.7 79.9 84.9 95.5 92.6 71.6 65.9 70.0 72.2	449 474 482 539 544 491 461 507 552	9.17 10.70 10.80 4.36 9.14 9.26 3.30 3.97 3.38	0.02 0.03 0.04 0.04 0.02 0.04 0.03 < 0.01	 NH3U-B 0.01 0.03 0.01 0.02 0.02 0.01 0.01 0.01 0.01 	 NOX-B 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 	OP-B 0.260 0.096 0.062 0.015 0.002 0.003 0.003 0.006 0.010	8.14 8.45 9.52 8.39 9.74 8.93 7.86 7.78 7.51	27.0 28.0 20.8 14.1 18.3 9.6 13.2 10.1 16.5	7.70 6.86 7.76 11.80 11.10 8.56 7.44 8.54 9.04	15.3 15.8 18.4 22.3 26.5 30.2 27.6 30.9 27.7	7KN-B 0.66 0.58 0.72 1.13 1.09 0.69 0.44 0.54 0.65	0.66 0.58 0.72 1.13 1.09 0.69 0.44 0.54 0.65	TP-B 0.299 0.131 0.088 0.045 0.033 < 0.030 < 0.030 < 0.030 < 0.030	2.6 < 1.0 1.7 1.4 3.9 1.5 1.1 < 1.0 < 1.0
10/5/2020 11/16/2020 12/7/2020	120 99 102	< 2.0 < 2.0 < 2.0 < 2.0	1.60 3.74 2.67	58.7 70.4 70.4	480 477 404	4.37 7.73 7.20	0.02 0.04 < 0.01 0.01	< 0.01 < 0.01 < 0.01 < 0.01	< 0.01 < 0.01 < 0.01 < 0.01	0.006 0.003 0.006	7.51 7.51 8.00 8.07	20.9 22.1 31.8	7.64 7.56 7.58	25.2 25.7 17.5	0.68 0.50 0.66	0.68 0.50 0.66	0.050 0.050 0.030 0.059	1.0 < 1.0 < 1.0
Average	102	< 2.1	3.34	75.5	488	6.95	< 0.03	< 0.01	< 0.01	0.039	8.33	19.4	8.47	23.6	0.70	0.70	< 0.071	< 1.5

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL13Y

Date	ALK-B	CBOD-B	CHLOF	RCCL-B	CON-B	DO-B	NH3-B	NH3U-B	NOX-B	OP-B	PH-B	SO4-B	STOC-B	TEMP-B	TKN-B	TN	TP-B	TSS-B
1/7/2020 2/4/2020 3/3/2020 4/6/2020	124 128 126 101	< 2.0 < 2.0 < 2.0 2.1	2.67 1.60 2.14 2.67	73.7 79.7 86.0 95.7	448 475 488 545	8.70 9.78 11.10 5.65	0.02 0.03 0.05 0.06	< 0.01 < 0.01 0.02 0.01	< 0.01 < 0.01 < 0.01 < 0.01	0.254 0.100 0.064 0.036	7.97 8.21 9.27 8.56	25.9 25.9 20.3 18.8	7.76 7.04 7.68 11.70	15.3 15.9 18.2 21.8	1.01 0.58 0.80 1.13	1.01 0.58 0.80 1.13	0.283 0.129 0.092 0.072	2.4 1.3 1.3
5/4/2020	86	3.0	8.54	91.1	556	8.89	0.02	0.02	< 0.01	0.003	9.46	12.0	10.70	26.5	1.05	1.05	0.039	3.7
6/1/2020	80	2.2	6.94	71.1	501	7.98	0.04	0.01	< 0.01	0.003	8.73	3.8	9.16	29.8	0.72	0.72	0.032	2.3
7/6/2020	96	2.4	3.74	67.6	493	2.40	0.04	< 0.01	< 0.01	0.003	7.68	12.0	7.91	27.5	0.74	0.74	< 0.030	1.0
8/10/2020	97	2.2	5.34	68.2	542	2.31	< 0.01	< 0.01	< 0.01	0.006	7.68	15.5	8.27	30.3	0.55	0.55	< 0.030	< 1.0
9/14/2020	130	< 2.0	8.54	70.1	553	2.67	0.02	< 0.01	< 0.01	0.009	7.54	16.6	8.80	27.6	0.65	0.65	< 0.030	1.3
10/5/2020	111	< 2.0	4.27	59.1	475	1.65	0.04	< 0.01	< 0.01	0.006	7.40	20.6	8.13	24.7	0.65	0.65	0.040	< 1.0
11/16/2020	115	< 2.0	3.74	69.7	489	6.40	0.07	< 0.01	< 0.01	0.049	7.98	13.7	7.54	25.6	0.66	0.66	0.083	< 1.0
12/7/2020	101	< 2.0	3.20	70.1	402	7.93	< 0.01	< 0.01	< 0.01	0.005	8.16	19.7	7.43	17.6	0.67	0.67		2.2
Average	108	< 2.2	4.45	75.2	497	6.29	< 0.03	< 0.01	< 0.01	0.045	8.22	17.1	8.51	23.4	0.77	0.77	< 0.074	< 1.7

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL14B

Date	CBOD-B	CHLOR	RCCON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	< 2.0	1.07	434	4.76	0.03	< 0.01	0.263	7.49	14.6	0.61	0.61	0.283	< 1.0	17.5
2/4/2020	< 2.0	4.27	449	6.09	0.05	< 0.01	0.062	7.65	14.3	0.59	0.59	0.090	1.5	17.5
3/3/2020	< 2.0	3.20	464	5.46	0.07	< 0.01	0.073	7.55	15.6	0.79	0.79	0.094	< 1.0	17.5
4/6/2020	3.3	9.61	573	0.66	0.05	< 0.01	0.129	7.19	20.8	1.10	1.10	0.206	2.1	17.5
5/4/2020	2.2	6.41	574	1.34	0.18	< 0.01	0.092	7.18	22.9	1.15	1.15	0.120	1.5	17.3
6/1/2020	8.0	33.60	636	0.16	0.34	< 0.01	0.279	6.96	27.0	2.02	2.02	0.367	10.4	17.6
7/7/2020	3.2	11.70	581	0.70	0.10	< 0.01	0.049	7.09	28.9	0.68	0.68	0.076	3.3	17.8
8/10/2020	< 2.0	1.60	577	1.27	0.05	< 0.01	0.025	6.95	30.1	0.77	0.77	0.077	5.9	16.6
10/6/2020	< 2.0	13.90	494	ND	0.10	< 0.01	0.082	7.15	25.2	0.72	0.72	0.127	1.3	17.7
11/17/2020	2.3	4.81	501	0.12	0.36	< 0.01	0.302	6.99	22.9	0.95	0.95	0.337	1.2	17.8
							0.100			2.21	2.21	0.470		
	< 2.9	9.02	528	2.28	0.13	< 0.01	0.136	7.22	22.2	0.94	0.94	0.178	< 2.9	17.5

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL14X

Date	ALK-B	CBOD-B	CHLORO	CL-B	CON-B	DO-B	NH3-B	NH3U-B	NOX-B	OP-B	PH-B	SO4-B	STOC-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	NS	< 2.0	< 0.80	ND	449	6.85	0.05	ND	< 0.01	0.223	7.90	ND	ND	14.8	0.66	0.66	0.232	< 1.0	17.6
2/5/2020	127	< 2.0	1.07	82.1	463	5.41	0.07	< 0.01	< 0.01	0.059	7.58	28.2	6.26	15.0	0.56	0.56	0.083	< 1.0	17.6
3/4/2020	132	< 2.0	1.07	90.0	495	10.80	0.11	0.04	< 0.01	0.121	9.08	23.9	6.89	19.2	0.70	0.70	0.139	1.2	17.6
4/7/2020	140	< 2.0	6.41	93.4	600	0.10	0.05	< 0.01	< 0.01	0.195	7.27	14.4	9.96	21.2	1.11	1.11	0.237	1.0	17.3
5/5/2020	137	2.4	7.48	87.2	589	0.20	0.17	< 0.01	< 0.01	0.131	7.28	11.7	9.56	22.7	1.17	1.17	0.180	1.4	17.4
6/2/2020	135	3.8	9.08	74.2	587	0.62	0.20	< 0.01	< 0.01	0.205	7.09	5.4	9.73	26.9	1.22	1.22	0.260	3.7	17.6
7/7/2020	124	5.9	18.70	69.3	561	3.70	0.05	< 0.01	< 0.01	0.039	7.20	13.7	8.46	27.8	0.75	0.75	0.052	4.7	17.7
8/10/2020	116	< 2.0	3.74	67.2	581	0.50	0.04	< 0.01	< 0.01	0.040	7.03	20.3	7.85	29.4	0.59	0.59	0.081	1.0	17.7
9/15/2020	127	2.4	10.10	74.7	574	0.87	0.08	< 0.01	< 0.01	0.067	7.19	10.9	7.79	27.3	0.71	0.71	0.097	1.3	17.8
10/6/2020	113	< 2.0	2.67	65.9	500	ND	0.08	< 0.01	< 0.01	0.080	7.09	21.9	7.15	25.1	0.61	0.61	0.105	< 1.0	17.7
11/17/2020	127	< 2.0	14.40	68.3	507	5.24	0.18	< 0.01	< 0.01	0.202	7.53	15.0	7.10	23.6	0.56	0.56	0.228	1.9	17.7
12/7/2020	125	< 2.0	3.20	67.5	434	9.80	0.03	< 0.0	< 0.01	0.033	8.01	23.9	7.25	17.3	0.55	0.55	0.051	< 1.0	17.8
Average	128	< 2.6	< 6.87	77.2	537	3.43	0.10	< 0.01	< 0.01	0.124	7.48	16.5	8.08	23.0	0.79	0.79	0.154	< 1.7	17.6

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL14Y

Date	ALK-B	CBOD-B	CHLORO	CL-B	CON-B	DO-B	NH3-B	NH3U-B	NOX-B	OP-B	PH-B	SO4-B	STOC-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	NS	< 2.0	< 0.80	NS	436	6.01	0.02	NS	< 0.01	0.071	7.82	NS	NS	14.4	1.50	1.50	0.099	< 1.0	17.6
2/5/2020	126	< 2.0	< 0.80	80.3	475	7.06	0.03	< 0.01	< 0.01	0.025	8.15	19.9	7.94	16.0	0.54	0.54	0.061	< 1.0	17.6
3/4/2020	110	< 2.0	4.27	83.5	487	7.66	0.05	< 0.01	< 0.01	0.079	8.58	19.8	7.91	18.9	0.64	0.64	0.101	1.7	17.6
4/7/2020	123	3.0	4.81	95.3	569	0.65	0.06	< 0.01	< 0.01	0.080	7.49	5.2	10.4	20.8	0.98	0.98	0.104	1.2	17.5
5/5/2020	105	4.2	3.20	93.0	610	0.44	0.14	< 0.01	< 0.01	0.086	7.36	8.0	10.2	22.7	1.15	1.15	0.132	1.5	17.4
6/2/2020	129	< 2.0	2.14	71.9	552	0.16	0.23	< 0.01	< 0.01	0.093	7.05	6.6	10.0	26.5	1.08	1.08	0.128	1.0	17.6
7/7/2020	123	2.5	5.34	66.6	547	0.03	0.14	< 0.01	< 0.01	0.055	6.99	13.7	7.67	26.7	0.69	0.69	0.039	1.0	17.7
8/10/2020	113	< 2.0	1.07	65.5	556	0.04	0.17	< 0.01	< 0.01	0.066	6.85	19.2	8.91	28.7	0.86	0.86	0.084	< 1.0	17.7
9/15/2020	125	< 2.0	6.41	77.3	576	0.06	0.09	< 0.01	< 0.01	0.124	7.01	15.9	7.78	27.1	0.69	0.69	0.142	1.1	17.8
10/6/2020	123	< 2.0	5.87	63.8	490	ND	0.09	< 0.01	< 0.01	0.061	7.10	17.6	7.69	25.0	0.68	0.68	0.098	< 1.0	17.7
11/17/2020	130	< 2.0	5.34	70.4	509	2.29	0.11	< 0.01	< 0.01	0.114	7.36	9.9	7.93	22.7	0.70	0.70	0.138	1.1	17.7
12/7/2020	126	< 2.0	2.14	69.1	436	9.45	0.05	< 0.01	< 0.01	0.031	7.92	21.0	7.04	17.2	0.56	0.56	0.058	< 1.0	17.8
Average	121	< 2.3	< 3.52	76.1	520	3.08	0.10	< 0.01	< 0.01	0.074	7.47	14.3	8.50	22.2	0.84	0.84	0.099	< 1.1	17.6

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL15X

Date	ALK	CBOD-B	CHLORO	CL-B	CON-B	DO-B	NH3-B	NH3U-B	NOX-B	OP-B	PH-B	SO4-B	STOC-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	144	< 2.0	< 0.80	71.0	452	3.16	0.06	< 0.01	< 0.01	0.231	7.55	11.5	7.64	15.8	0.66	0.66	0.257	< 1.0	25.1
2/5/2020	138	< 2.0	2.67	80.9	493	3.96	0.09	< 0.01	< 0.01	0.126	7.70	21.6	7.59	16.0	0.64	0.64	0.150	< 1.0	24.3
3/4/2020	121	2.2	4.81	84.5	500	8.25	0.07	< 0.01	< 0.01	0.099	8.27	18.6	8.91	20.0	0.68	0.68	0.115	1.5	24.3
4/6/2020	144	9.2	81.20	93.4	621	2.50	0.28	< 0.01	< 0.01	0.210	7.68	16.2	14.20	22.4	2.54	2.54	0.407	7.4	24.2
5/5/2020	118	2.4	11.20	102.0	682	5.69	0.21	< 0.01	0.02	0.039	8.86	9.6	15.00	28.8	1.60	1.62	0.099	2.7	24.1
6/1/2020	125	3.3	11.20	81.4	623	1.89	0.24	< 0.01	< 0.01	0.064	7.32	< 2.0	15.40	28.5	1.49	1.49	0.105	2.2	24.5
7/6/2020	131	2.5	18.20	73.8	575	1.44	0.26	< 0.01	< 0.01	0.076	7.19	< 2.0	12.60	27.4	1.30	1.30	0.132	2.4	24.4
8/10/2020	119	2.8	10.20	53.3	535	0.07	0.24	< 0.01	< 0.01	0.046	6.99	< 2.0	11.50	28.9	1.06	1.06	0.087	2.9	24.5
9/14/2020	123	4.7	15.00	67.0	573	0.57	0.17	< 0.01	< 0.01	0.055	7.13	< 2.0	10.10	27.0	0.96	0.96	0.092	2.4	24.5
10/5/2020	114	< 2.0	3.74	53.3	431	0.63	0.11	< 0.01	< 0.01	0.061	7.12	< 2.0	8.70	24.6	0.74	0.74	0.083	1.3	24.6
11/16/2020	126	< 2.0	4.81	69.4	479	0.39	0.11	< 0.01	< 0.01	0.066	7.28	< 2.0	9.51	24.1	1.16	1.16	0.134	< 1.0	24.5
12/7/2020	141	< 2.0	3.74	69.3	453	1.03	0.15	< 0.01	< 0.01	0.044	7.53	13.1	8.91	16.4	0.91	0.91	0.071	< 1.0	24.3
Average	129	< 3.1	< 13.96	74.9	535	2.47	0.17	< 0.01	< 0.01	0.093	7.55	< 8.6	10.84	23.3	1.15	1.15	0.144	< 2.2	24.4

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL18B

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	< 0.80	424	5.87	0.03	0.07	0.213	7.55	14.3	0.63	0.70	0.222	< 1.0	18.2
2/5/2020	< 2.0	< 0.80	485	4.96	0.04	0.06	0.126	7.45	15.5	0.53	0.59	0.145	2.3	18.1
3/4/2020	< 2.0	1.60	494	2.90	0.04	0.06	0.133	7.37	18.4	0.69	0.75	0.158	5.4	18.0
4/7/2020	2.7	13.40	579	0.75	0.08	0.03	0.147	7.13	19.5	1.44	1.47	0.242	1.8	17.9
5/5/2020 ^(a)	6.1	5.87	632	0.23	0.24	< 0.01	0.110	7.00	22.8	2.18	2.18	0.202	151.0	17.5
6/2/2020	< 2.0	< 0.80	609	1.42	0.09	0.05	0.064	7.11	26.8	1.17	1.22	0.100	< 1.0	17.7
7/7/2020	< 2.0	2.67	551	1.57	0.08	0.08	0.063	7.20	27.1	0.94	1.02	0.095	5.4	17.8
8/11/2020	< 2.0	< 0.80	505	1.00	0.12	0.10	0.072	7.20	27.8	0.83	0.93	0.092	2.8	17.7
9/15/2020	< 2.0	1.60	563	2.35	0.09	0.11	0.051	7.25	26.7	0.76	0.87	0.069	3.3	17.8
10/6/2020	< 2.0	< 0.80	463	ND	0.06	0.08	0.063	7.23	24.9	0.68	0.76	0.087	2.3	17.9
11/17/2020	< 2.0	1.07	475	3.58	0.07	0.11	0.103	7.45	21.4	0.56	0.67	0.121	1.7	17.8
12/7/2020	< 2.0	2.14	457	6.49	0.09	0.05	0.061	7.68	16.9	0.76	0.81	0.077	7.1	17.9
Average	< 2.4	< 2.70	520	2.83	0.09	< 0.07	0.101	7.30	21.8	0.93	1.00	0.134	< 15.4	17.9

⁽a) TSS was significantly high, and believed to be caused by nearby construction

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL18E

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	0.80	427	4.83	0.01	0.07	0.196	7.43	13.9	0.52	0.59	0.202	< 1.0	18.1
2/5/2020	2.1	0.80	478	4.26	0.03	0.06	0.121	7.33	15.4	0.54	0.60	0.145	< 1.0	18.0
3/4/2020	< 2.0	0.80	495	3.37	0.04	0.02	0.124	7.28	18.6	0.66	0.68	0.142	1.3	18.0
4/7/2020	< 2.0	9.08	583	1.55	0.05	< 0.01	0.158	7.07	19.2	1.28	1.28	0.196	1.7	17.8
6/2/2020	< 2.0	1.60	600	3.12	0.05	< 0.01	0.064	7.20	25.8	1.20	1.20	0.102	1.6	ND
7/7/2020	< 2.0	5.34	544	2.10	0.04	< 0.01	0.048	7.12	25.9	0.80	0.80	0.070	1.8	18.0
Average	< 2.0	3.07	521	3.21	0.04	< 0.03	0.119	7.24	19.8	0.83	0.86	0.143	< 1.4	18.0

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WL18F

Date	CBOD-B		CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
8/11/2020 9/15/2020 10/6/2020 11/17/2020 12/7/2020	< 2.0 < 2.0 < 2.0 4.0 < 2.0	0.80 1.07 2.14 2.14 6.41	510 566 461 458 452	0.77 2.30 ND 3.73 6.16	0.04 0.03 0.03 0.03 0.02	< 0.01 < 0.01 < 0.01 0.05 0.04	0.090 0.097 0.066 0.098 0.135	7.14 7.26 7.31 7.42 7.53	25.8 25.5 24.1 21.3 16.2	0.68 0.68 0.37 0.47 0.59	0.68 0.68 0.37 0.52 0.63	0.107 0.098 0.091 0.112 0.139	1.7 1.7 1.5 1.4 3.2	17.8 17.9 17.8 17.7 17.9
Average	< 2.4	2.51	489	3.24	0.03	< 0.02	0.097	7.33	22.6	0.56	0.58	0.109	1.9	17.8

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WLLS2

Date	CBOD-B	CHLORO	CON-B	DO-B	NH3-B	NOX-B	OP-B	PH-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	< 2.0	< 0.80	459	7.72	0.02	0.04	0.010	8.01	17.5	0.51	0.55	0.044	1.6	15.8
2/5/2020	< 2.0	1.60	453	9.16	0.03	< 0.01	0.004	8.50	17.5	0.50	0.50	0.030	1.6	15.6
3/4/2020	< 2.0	2.67	460	10.70	0.04	< 0.01	0.006	8.94	20.0	0.64	0.64	< 0.030	1.2	15.6
4/6/2020	< 2.0	2.14	508	8.57	0.04	0.01	0.008	9.19	25.8	0.84	0.85	< 0.030	1.2	15.3
5/5/2020	< 2.0	1.60	560	9.75	0.01	0.01	0.005	9.61	27.9	0.86	0.87	< 0.030	1.6	15.4
6/2/2020	< 2.0	2.14	562	6.94	0.05	< 0.01	0.005	9.32	28.9	0.67	0.67	< 0.030	1.1	16.0
7/7/2020	< 2.0	3.74	547	5.03	0.04	< 0.01	0.006	7.89	30.8	0.66	0.66	< 0.030	< 1.0	16.3
8/10/2020	< 2.0	3.20	555	7.51	< 0.01	< 0.01	0.008	8.33	33.3	0.56	0.56	0.068	< 1.0	16.5
9/15/2020	< 2.0	8.01	573	1.69	0.05	< 0.01	0.011	7.49	28.8	0.69	0.69	0.031	< 1.0	16.1
10/6/2020	< 2.0	3.20	478	ND	0.13	< 0.01	0.014	7.44	25.5	0.78	0.78	0.040	< 1.0	16.6
11/16/2020	< 2.0	1.07	496	2.00	0.19	0.07	0.019	7.60	24.5	0.66	0.73	0.040	< 1.0	16.5
12/7/2020	< 2.0	< 0.80	448	9.50	0.10	0.09	0.020	7.79	17.7	0.72	0.81	0.036	< 1.0	16.0
Average	< 2.0	< 2.58	508	7.14	< 0.06	< 0.02	0.010	8.34	24.9	0.67	0.69	< 0.037	< 1.2	16.0

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: WLHS9

Date	ALK-B	CBOD-B	CHLORO	CL-B	CON-B	DO-B	NH3-B	NH3U-B	NOX-B	OP-B	PH-B	SO4-B	STOC-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/8/2020	121	< 2.0	< 0.80	76.4	459	7.34	0.03	< 0.01	0.05	0.011	8.00	18.1	6.92	17.4	0.65	0.70	0.034	1.3	15.8
2/5/2020	112	< 2.0	1.07	78.6	454	9.87	0.03	< 0.01	< 0.01	0.004	8.58	14.4	7.03	17.6	0.54	0.54	< 0.030	1.0	15.6
3/4/2020	100	< 2.0	1.60	85.5	460	11.40	0.04	0.01	< 0.01	0.008	8.96	20.4	7.29	20.0	0.66	0.66	< 0.030	1.2	15.6
4/6/2020	80	< 2.0	6.94	85.6	511	6.34	0.03	0.02	0.01	0.009	9.09	16.0	7.94	25.8	0.84	0.85	< 0.030	4.3	15.3
5/5/2020	72	< 2.0	1.60	94.3	553	7.43	0.03	0.02	< 0.01	0.005	9.40	15.0	8.32	27.5	0.86	0.86	< 0.030	3.1	15.4
6/2/2020	75	< 2.0	2.67	89.0	560	7.35	0.06	0.05	< 0.01	0.004	9.41	13.1	9.01	28.9	0.70	0.70	< 0.030	2.1	16.0
7/7/2020	101	2.0	2.67	67.9	554	5.59	0.04	< 0.01	< 0.01	0.006	8.10	10.0	8.53	31.7	0.62	0.62	< 0.030	1.2	16.3
8/10/2020	100	< 2.0	2.14	65.3	555	7.60	< 0.01	< 0.01	< 0.01	0.008	8.41	8.8	8.16	33.7	0.59	0.59	< 0.030	< 1.0	16.5
9/15/2020	135	3.2	4.81	68.3	572	2.42	0.05	< 0.01	< 0.01	0.012	7.54	9.8	8.33	28.9	0.70	0.70	< 0.030	< 1.0	16.1
10/6/2020	125	< 2.0	1.07	56.5	478	ND	0.13	< 0.01	< 0.01	0.014	7.51	12.0	7.40	25.5	0.73	0.73	0.033	< 1.0	16.6
11/16/2020	132	< 2.0	1.60	69.4	496	2.30	0.19	< 0.01	0.07	0.020	7.61	16.9	7.18	24.6	0.82	0.89	0.046	< 1.0	16.4
12/7/2020	136	< 2.0	< 0.80	70.1	449	4.91	0.08	< 0.01	0.13	0.021	7.85	10.4	7.39	17.8	0.79	0.92	0.045	< 1.0	16.0
Average	107	< 2.1	< 2.31	75.6	508	6.60	< 0.06	< 0.02	< 0.03	0.010	8.37	13.7	7.79	25.0	0.71	0.73	< 0.033	< 1.6	16.0

Orlando Easterly Wetlands 2020 Internal Water Quality Sample Point: HS10

Date	ALK-B	CBOD-B	CHLORO	CL-B	CON-B	DO-B	NH3-B	NH3U-B	NOX-B	OP-B	PH-B	SO4-B	STOC-B	TDS-B	TEMP-B	TKN-B	TN	TP-B	TSS-B	WATERLVL
1/7/2020	125	< 2.0	< 0.80	80.7	430	3.26	0.04	< 0.01	0.04	0.084	7.11	24.4	6.95	322	14.1	0.63	0.67	0.098	< 1.0	15.2
2/4/2020	122	< 2.0	< 0.80	81.3	447	3.46	0.04	< 0.01	0.03	0.053	7.10	21.8	6.87	294	14.5	0.52	0.55	0.076	< 1.0	15.0
3/3/2020	119	< 2.0	6.41	83.1	461	2.72	0.04	< 0.01	< 0.01	0.044	6.98	19.9	7.14	294	16.8	0.58	0.58	0.069	1.6	15.2
4/6/2020	106	< 2.0	1.07	91.4	501	0.36	0.03	< 0.01	< 0.01	0.019	6.84	10.3	9.54	306	20.1	0.75	0.75	0.032	< 1.0	15.0
5/4/2020	96	< 2.0	1.07	93.1	546	2.59	0.01	< 0.01	< 0.01	0.007	6.97	15.9	9.47	298	23.4	0.82	0.82	< 0.030	< 1.0	ND
6/1/2020	87	< 2.0	1.07	82.0	538	5.21	0.04	< 0.01	< 0.01	0.014	6.83	10.1	9.04	292	27.2	0.88	0.88	< 0.030	< 1.0	15.5
7/6/2020	89	2.2	4.81	65.3	455	0.07	0.04	< 0.01	< 0.01	0.037	6.87	5.8	8.10	218	26.4	0.77	0.77	0.058	2.6	15.8
8/10/2020	110	< 2.0	2.14	65.1	533	0.10	0.03	< 0.01	< 0.01	0.032	6.90	6.5	7.83	258	29.1	0.60	0.60	0.038	< 1.0	15.9
9/14/2020	121	< 2.0	1.60	72.4	542	0.34	0.03	< 0.01	< 0.01	0.023	6.87	12.0	7.71	282	27.8	0.56	0.56	0.038	2.1	15.5
10/5/2020	126	< 2.0	< 0.80	57.1	476	6.78	0.06	< 0.01	< 0.01	0.024	6.96	12.8	6.80	284	24.8	0.56	0.56	0.046	< 1.0	15.9
11/16/2020	128	< 2.0	1.60	71.8	497	0.17	0.02	< 0.01	< 0.01	0.019	7.11	20.9	6.89	286	24.3	0.49	0.49	0.039	< 1.0	15.6
12/7/2020	124	< 2.0	< 0.80	70.3	432	1.49	0.03	< 0.01	0.03	0.011	7.22	23.7	7.02	290	16.8	0.63	0.66	< 0.030	< 1.0	15.2
	110	0.0	1.01	70.4	100	0.04	0.00	0.04	0.00	0.004	0.00	45.0	7.70	005	00.4	0.05	0.00	0.040	4.0	45.4
Average	113	< 2.0	< 1.91	76.1	488	2.21	0.03	< 0.01	< 0.02	0.031	6.98	15.3	7.78	285	22.1	0.65	0.66	< 0.049	< 1.3	15.4

Appendix D 2020 OEW Semiannual Metals, Organochlorine Pesticides, PCBs and Volatile Organic Compounds

Index:

NA: Not Analyzed

J FDEP Analysis Code: J Code

ORLANDO EASTERLY WETLANDS 2020 Semi-Annual Metals Testing

Method	Metal	Units	WP1 (Ir	nfluent)	WL	12Y	WL	15X	Н	S9	HS10 (D00	02 Outfall)
			5/12/2020	11/3/2020	5/12/2020	11/3/2020	5/12/2020	11/3/2020	5/12/2020	11/3/2020	5/12/2020	11/3/2020
	Aluminum - Al	(ug/L)	<50.0	<50.0	<50.0	<50.0	67.2	<50.0	<50.0	<50.0	195.0	<50.0
	Arsenic - As	(ug/L)	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0	<10.0
	Boron - B	(ug/L)	169	183	183	139	126	130	159	116	183	124
	Barium - Ba	(ug/L)	8.30	8.70	10.10	9.80	11.1	10.7	<5.00	10.6	7.30	9.3
	Calcium ICP- Ca	(ug/L)	38.7	37.1	43.6	42.1	27.7	45.9	14.6	41.0	22.4	39.5
	Chromium - Cr	(ug/L)	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
	Iron - Fe	(ug/L)	53.1	43.0	<15.0	15.4	16.2	<15.0	<15.0	<15.0	<15.0	<15.0
ICP	Hardness	(mg/L as CaCO3)	131.0	123	149	138.0	107	144.0	72	129.0	92	127
	Magnesium ICP	(ug/L)	8.30	7.44	9.79	7.96	9.25	7.16	8.56	6.47	8.76	7.00
	Manganese - Mn	(ug/L)	2.30	<1.50	3.30	4.40	4.80	4.00	2.10	<1.50	4.90	1.80
	Nickel - Ni	(ug/L)	9.3	8.2	9.70	9.20	3.50	10.0	<2.00	8.30	2.60	9.00
	Selenium - Se	(ug/L)	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
	Zinc - Zn	(mg/L)	14.9	18.2	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00	<5.00
	Silver - Ag	(ug/L)	<0.05	<0.05	< 0.05	<0.05	<0.05	<0.05	< 0.05	< 0.05	<0.05	<0.05
	Beryllium - Be	(ug/L)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
AA	Cadmium - Cd	(ug/L)	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Graphite	Copper - Cu	(ug/L)	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00
Furnace	Lead - Pb	(ug/L)	<0.50	<0.50	<0.50	0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
	Antimony - Sb	(ug/L)	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50	<2.50
	Thallium - Tl	(ug/L)	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Cold Vapor	Mercury - Hg	(ug/L)	<0.20	<0.20	<0.20	<20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20

WL 11X is not flowing due to a biogeochemical study; WL 12Y was sampled in its place.

EPA Method# 608.3: Organochlorine Pesticides and PCBs 2020 Semi-Annual Monitoring Data Location: WP1

Analysis (vall)	5/12/	2020	11/16/2	2020
Analyte (ug/L)	Result	MDL	Result	MDL
Aldrin	< 0.0035	0.0035	< 0.0037	0.0037
alpha-BHC	< 0.0016	0.0016	< 0.0018 ^J	0.0018
beta-BHC	< 0.0044	0.0044	< 0.0047	0.0047
Chlordane (technical)	< 0.044	0.044	< 0.0033	0.0033
4,4'-DDD	< 0.0030	0.0030	< 0.0027	0.0027
4,4'-DDE	< 0.0025	0.0025	< 0.0036	0.0036
4,4'-DDT	< 0.0034	0.0034	< 0.048	0.048
DCB Decachlorobiphenyl	NA		21% ^J	
delta-BHC	< 0.0036	0.0036	< 0.0039	0.0039
Dieldrin	< 0.0018	0.0018	< 0.002	0.002
Endosulfan I	< 0.0017	0.0017	< 0.0018	0.0018
Endosulfan II	< 0.0020	0.0020	< 0.0022	0.0022
Endosulfan sulfate	< 0.0025	0.0025	< 0.0026	0.0026
Endrin	< 0.0026	0.0026	< 0.0028	0.0028
Endrin aldehyde	< 0.0032	0.0032	< 0.0035	0.0035
gamma-BHC (Lindane)	< 0.0017	0.0017	< 0.0019	0.0019
Heptachlor	< 0.0034	0.0034	< 0.0037	0.0037
Heptachlor epoxide	< 0.0018	0.0018	< 0.0019	0.0019
Methoxychlor	< 0.0047	0.0047	< 0.0051	0.0051
PCB-1016	< 0.087	0.087	< 0.093	0.093
PCB-1221	< 0.092	0.092	< 0.099	0.099
PCB-1232	< 0.12	0.12	< 0.13	0.13
PCB-1242	< 0.092	0.092	< 0.099	0.099
PCB-1248	< 0.10	0.10	< 0.11	0.11
PCB-1254	< 0.053	0.053	< 0.06	0.06
PCB-1260	< 0.058	0.058	< 0.062	0.062
PCB-1262	< 0.092	0.092	< 0.099	0.099
PCB-1268	< 0.12	0.12	< 0.12	0.12
Tetrachloro-m-xylene	NA		60%	
Toxaphene	< 0.19	0.19	< 0.2	0.2

EPA Method# 608.3: Organochlorine Pesticides and PCBs 2020 Semi-Annual Monitoring Data Location: WL12Y

Analyta (vall.)	5/12/2	2020	11/16/2	2020
Analyte (ug/L)	Result	MDL	Result	MDL
Aldrin	< 0.0035	0.0035	< 0.0035	0.0035
alpha-BHC	< 0.0017	0.0017	< 0.0016 ^J	0.0016
beta-BHC	< 0.0045	0.0045	< 0.0044	0.0044
Chlordane (technical)	< 0.045	0.045	< 0.044	0.044
4,4'-DDD	< 0.0031	0.0031	< 0.0030	0.003
4,4'-DDE	< 0.0025	0.0025	< 0.0025	0.0025
4,4'-DDT	< 0.0034	0.0034	< 0.0034	0.0034
DCB Decachlorobiphenyl	NA		23% ^J	
delta-BHC	< 0.0037	0.0037	< 0.0036	0.0036
Dieldrin	< 0.0019	0.0019	0.0026	0.0018
Endosulfan I	< 0.0017	0.0017	0.0096	0.0017
Endosulfan II	< 0.0021	0.0021	< 0.0020	0.002
Endosulfan sulfate	< 0.0025	0.0025	< 0.0025	0.0025
Endrin	< 0.0026	0.0026	< 0.0026	0.0026
Endrin aldehyde	< 0.0033	0.0033	< 0.0032	0.0032
gamma-BHC (Lindane)	< 0.0018	0.0018	< 0.0017	0.0017
Heptachlor	< 0.0035	0.0035	< 0.0034	0.0034
Heptachlor epoxide	< 0.0018	0.0018	< 0.0018	0.0018
Methoxychlor	< 0.0048	0.0048	< 0.0047	0.0047
PCB-1016	< 0.088	0.088	< 0.087	0.087
PCB-1221	< 0.093	0.093	< 0.092	0.092
PCB-1232	< 0.12	0.12	< 0.12	0.12
PCB-1242	< 0.093	0.093	< 0.092	0.092
PCB-1248	< 0.10	0.10	< 0.10	0.1
PCB-1254	< 0.054	0.054	< 0.053	0.05
PCB-1260	< 0.059	0.059	< 0.058	0.058
PCB-1262	< 0.093	0.093	< 0.092	0.092
PCB-1268	< 0.12	0.12	< 0.12	0.12
Tetrachloro-m-xylene	NA		82%	
Toxaphene	< 0.19	0.19	< 0.19	0.19

WL11X was not flowing, due to biogeochemistry study. EPA 608.3 samples were collected at WL12Y instead.

EPA Method# 608.3: Organochlorine Pesticides and PCBs 2020 Semi-Annual Monitoring Data Location: WL15X

Analysis (confl.)	5/12/2	2020	11/16/2	2020
Analyte (ug/L)	Result	MDL	Result	MDL
Aldrin	< 0.0035	0.0035	< 0.0038	0.0038
alpha-BHC	< 0.0017	0.0017	< 0.0018 ^J	0.0018
beta-BHC	< 0.0045	0.0045	< 0.0047	0.0047
Chlordane (technical)	< 0.045	0.045	< 0.048	0.048
4,4'-DDD	< 0.0031	0.0031	< 0.0033	0.0033
4,4'-DDE	< 0.0025	0.0025	< 0.0027	0.0027
4,4'-DDT	< 0.0034	0.0034	< 0.0037	0.0037
DCB Decachlorobiphenyl	NA		25% ^J	
delta-BHC	< 0.0037	0.0037	< 0.0039	0.0039
Dieldrin	< 0.0019	0.0019	< 0.002	0.002
Endosulfan I	< 0.0017	0.0017	< 0.0018	0.0018
Endosulfan II	< 0.0021	0.0021	< 0.0022	0.0022
Endosulfan sulfate	< 0.0025	0.0025	< 0.0027	0.0027
Endrin	< 0.0026	0.0026	< 0.0028	0.0028
Endrin aldehyde	< 0.0033	0.0033	< 0.0035	0.0035
gamma-BHC (Lindane)	< 0.0018	0.0018	< 0.0019	0.0019
Heptachlor	< 0.0035	0.0035	< 0.0037	0.0037
Heptachlor epoxide	< 0.0018	0.0018	< 0.0019	0.0019
Methoxychlor	< 0.0048	0.0048	< 0.0051	0.0051
PCB-1016	< 0.088	0.088	< 0.094	0.094
PCB-1221	< 0.093	0.093	< 0.099	0.099
PCB-1232	< 0.12	0.12	< 0.13	0.13
PCB-1242	< 0.093	0.093	< 0.099	0.099
PCB-1248	< 0.10	0.10	< 0.11	0.11
PCB-1254	< 0.054	0.054	< 0.06	0.06
PCB-1260	< 0.059	0.059	< 0.063	0.063
PCB-1262	< 0.093	0.093	< 0.099	0.099
PCB-1268	< 0.12	0.12	< 0.13	0.13
Tetrachloro-m-xylene	NA		81%	
Toxaphene	< 0.19	0.19	< 0.2	0.20

EPA Method# 608.3: Organochlorine Pesticides and PCBs 2020 Semi-Annual Monitoring Data

Location: HS9

Analysis (vall.)	5/12/2	2020	11/16/2	2020
Analyte (ug/L)	Result	MDL	Result	MDL
Aldrin	< 0.0035	0.0035	< 0.0016 ^J	0.0016
alpha-BHC	< 0.0016	0.0016	< 0.0044	0.0044
beta-BHC	< 0.0044	0.0044	< 0.044	0.044
Chlordane (technical)	< 0.044	0.044	< 0.003	0.003
4,4'-DDD	< 0.0030	0.0030	< 0.0025	0.0025
4,4'-DDE	< 0.0025	0.0025	< 0.0034	0.0034
4,4'-DDT	< 0.0034	0.0034	< 0.0035	0.0035
DCB Decachlorobiphenyl	NA		25% ^J	
delta-BHC	< 0.0036	0.0036	< 0.0036	0.0036
Dieldrin	< 0.0018	0.0018	< 0.0018	0.0018
Endosulfan I	< 0.0017	0.0017	< 0.0017	0.0017
Endosulfan II	< 0.0020	0.0020	< 0.002	0.002
Endosulfan sulfate	< 0.0024	0.0024	< 0.0024	0.0024
Endrin	< 0.0025	0.0025	< 0.0025	0.0025
Endrin aldehyde	< 0.0032	0.0032	< 0.0032	0.0032
gamma-BHC (Lindane)	< 0.0017	0.0017	< 0.0017	0.0017
Heptachlor	< 0.0034	0.0034	< 0.0034	0.0034
Heptachlor epoxide	< 0.0018	0.0018	< 0.0018	0.0018
Methoxychlor	< 0.0047	0.0047	< 0.0047	0.0047
PCB-1016	< 0.086	0.086	< 0.086	0.086
PCB-1221	< 0.091	0.091	< 0.091	0.091
PCB-1232	< 0.12	0.12	< 0.12	0.12
PCB-1242	< 0.091	0.091	< 0.091	0.091
PCB-1248	< 0.10	0.10	< 0.1	0.1
PCB-1254	< 0.053	0.053	< 0.053	0.053
PCB-1260	< 0.058	0.058	< 0.058	0.058
PCB-1262	< 0.091	0.091	< 0.091	0.091
PCB-1268	< 0.12	0.12	< 0.12	0.12
Tetrachloro-m-xylene	NA		79%	
Toxaphene	< 0.19	0.19	< 0.19	0.19

EPA Method# 608.3: Organochlorine Pesticides and PCBs 2020 Semi-Annual Monitoring Data Location: HS10

	5/12/2	2020	11/16/2	2020
Analyte (ug/L)	Result	MDL	Result	MDL
Aldrin	< 0.0035	0.0035	< 0.0036	0.0036
alpha-BHC	< 0.0017	0.0017	< 0.0017 ^J	0.0017
beta-BHC	< 0.0045	0.0045	< 0.0046	0.0046
Chlordane (technical)	< 0.045	0.045	< 0.046	0.046
4,4'-DDD	< 0.0031	0.0031	< 0.0032	0.0032
4,4'-DDE	< 0.0026	0.0026	< 0.0026	0.0026
4,4'-DDT	< 0.0034	0.0034	< 0.0035	0.0035
DCB Decachlorobiphenyl	NA		32% ^J	
delta-BHC	< 0.0037	0.0037	< 0.0038	0.0038
Dieldrin	< 0.0019	0.0019	< 0.0019	0.0019
Endosulfan I	< 0.0017	0.0017	< 0.0018	0.0018
Endosulfan II	< 0.0021	0.0021	< 0.0021	0.0021
Endosulfan sulfate	< 0.0025	0.0025	< 0.0026	0.0026
Endrin	< 0.0026	0.0026	< 0.0027	0.0027
Endrin aldehyde	< 0.0033	0.0033	< 0.0034	0.0034
gamma-BHC (Lindane)	< 0.0018	0.0018	< 0.0018	0.0018
Heptachlor	< 0.0035	0.0035	< 0.0036	0.0036
Heptachlor epoxide	< 0.0018	0.0018	< 0.0019	0.0019
Methoxychlor	< 0.0048	0.0048	< 0.0049	0.0049
PCB-1016	< 0.088	0.088	< 0.09	0.09
PCB-1221	< 0.093	0.093	< 0.095	0.095
PCB-1232	< 0.12	0.12	< 0.13	0.13
PCB-1242	< 0.093	0.093	< 0.095	0.095
PCB-1248	< 0.10	0.10	< 0.11	0.11
PCB-1254	< 0.054	0.054	< 0.055	0.055
PCB-1260	< 0.059	0.059	< 0.06	0.06
PCB-1262	< 0.093	0.093	< 0.095	0.095
PCB-1268	< 0.12	0.12	< 0.12	0.12
Tetrachloro-m-xylene	NA		94%	
Toxaphene	< 0.19	0.19	< 0.2	0.2

ORLANDO EASTERLY WETLANDS EPA Method# 624.1 Volatile Organic Compounds 2020

Amaluta	MDL in	W	P1	WL1	2Y ^(a)	WL	.15X	Н	S9	н	310
Analyte	ug/L	5/12/2020	11/23/2020	5/12/2020	11/16/2020	5/12/2020	11/23/2020	5/12/2020	11/16/2020	5/12/2020	11/16/2020
1,1,1-Trichloroethane	0.30	< 0.30	< 0.30	< 0.30	< 0.3	< 0.30	< 0.3	< 0.30	< 0.3	< 0.30	< 0.3
1,1,2,2-Tetrachloroethane	0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17	< 0.17
1,1,2-Trichloroethane	0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29
1,1-Dichloroethane	0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32
1,1-Dichloroethene	0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
1,2-Dichlorobenzene	0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
1,2-Dichloroethane	0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
1,2-Dichloropropane	0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52	< 0.52
1,3-Dichlorobenzene	0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
1,4-Dichlorobenzene	0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22
4-Bromofluorobenzene	%	NA	104	NA	98	NA	105	NA	98	NA	101
Benzene	0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Bromoform	1.1	< 1.1	< 1.1	< 1.1 ^J	< 1.1	< 1.1 ^J	< 1.1	< 1.1 ^J	< 1.1	< 1.1 ^J	< 1.1
Bromomethane	2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Carbon tetrachloride	0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23
Chlorobenzene	0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27
Chlorodibromomethane	0.31	6.3	2.8	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31
Chloroethane	2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5	< 2.5
Chloroform	0.29	86	85	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29	< 0.29
Chloromethane	0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32
cis-1,2-Dichloroethene	0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32	< 0.32
cis-1,3-Dichloropropene	0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
Dibromofluoromethane	%	NA	98	NA	97	NA	101	NA	99	NA	99
Dichlorobromomethane	0.23	32	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23	< 0.23
Dichlorodifluoromethane	2.5	< 2.5	< 2.5	2.5	< 2.5	2.5	< 2.5	2.5	< 2.5	2.5	2.5
Ethylbenzene	0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27
Methyl tert-butyl ether	0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44	< 0.44
Methylene Chloride	1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4	< 1.4
m-Xylene & p-Xylene	0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
Naphthalene	1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6	< 1.6
o-Xylene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Toluene	0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24	< 0.24
Toluene-d8 (Surr)	%	NA	102	NA	102	NA	101	NA	102	NA	102
trans-1,2-Dichloroethene	0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39	< 0.39
trans-1,3-Dichloropropene	0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27	< 0.27
Trichloroethene	0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61	< 0.61
Vinyl chloride	0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26	< 0.26
Xylenes, Total	0.50	< 0.50	< 0.50	< 0.50	< 0.5	< 0.50	< 0.5	< 0.50	< 0.5	< 0.50	< 0.5

^(a) WL11X was not flowing, due to biogeochemistry study. EPA 624.1 samples were collected at WL12Y instead.

Electronic References and Credits

Credits: ESRI Digital Globe, GEO Eye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Get Mapping, Aerogrid, IGN. IGP, swisstopo, and the GIS User Community

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